

SAP:

called..

4 NCR ✓

2 CGA ✓

✓ 3 DA Consulting ✓

4 PLAUT ✓

5 EDS/A.T. Kearney ✓

? 6 SNI ✓

\* origin ✓

✓ 8 Ernst & Young ✓

✓ 9 Coopers & Lybrand ✓

10 KPMG. ✓

SI Clients:

- ✓ IBM
- GE Information Services
- ✓ DIGITAL
- C&I Informatique.
- BELL Communications.
- ✓ Andersen Consulting.

SAP7				
17-03	18-03	19-03	20-03	21-03
✓	✓	✓	BACK ON MONDAY.	
✓	✓	✓	NOT BACK TILL 24-03	
✓	✓	✓		
✓	✓	✓	VM	VM
✓	✓	✓	need to tell to 2nd person not avail	
✓	✓	✓		
✓	✓	✓	VM	VM
✓	✓	✓	VM	VM
✓	✓	✓	✓	✓

NEC  
C&C Int.

0

0:00

11



11



From 26.03 (Those already contacted are on previous list.)

SAP Client Calls:

	26.03	04
• CGA.	✓	✓
• DA Consulting.	✓	✓
• EDS/A.T. Kearney.	✓	—
• SNI.	✓	✓
• Ernst & Young.	✓	✓
• Coopers & Lybrand.	✓	✓





## CONTACT REPORT

Non Client/Prospect File: ☐ Media ☐ Financial ☐ Other

### INPUT

Staff: Init. PL Init. \_\_\_\_\_ ☐ INPUT office ☐ Client Office ☐ Other \_\_\_\_\_

Contact Date:        /        /

Date Written: 17.03.97

Company <b>KPMG</b>		DISTRIBUTION:			Prog./Proj. ID
Name <b>Janis Fratamico</b>		Action	Info.	By When	Describe Action-F/U
Title <b></b>					
Address					
Phone: ( <b>610</b> ) <b>995. 3225</b>					
Fax: ( )					

17.03 not back <sup>till</sup> Thursday. left message.

20.03 still not back.

21-03 Out of office all day - left VM.

25.06 Finally got routed to Christine Binzer  
703-450-7348

crbinzer@kpmg.com

04.04 Left VM. messages returned <sup>send gas.</sup> undelivered ✓

☐ Continued over

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\* No names will be added without a completed  
change order and program manager approval.

Program Manager  
Authorization \_\_\_\_\_

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Name \_\_\_\_\_

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INPUT

Staff: Init. PL Init. \_\_\_\_\_ ☐ INPUT office ☐ Client Office ☐ Other \_\_\_\_\_

Contact Date:

Date Written: 12/11/96

Company	CAP GEMINI AMEMIRGA			PROG./PROJ. ID
Name	FLORENCE GOMAR			Describe Action-F/U
Title				
Address				
Phone: ( )				
Fax: ( )				

713 - 307 - 8237

FAX - 7901.

17-03 Left Message.

18-03 Left VM.

not in until 24th.

26-03 Out of office until 28th - left VM + tel#.

02-04 Shannon Jameson (713 - 307 - 8248).

04-04 Left VM.

Back on 8th.

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Name \_\_\_\_\_

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Contact Date:        /        /

INPUT

Staff: Init. PL Init. \_\_\_\_\_ ☐ INPUT office ☐ Client Office ☐ Other \_\_\_\_\_

Date Written: 17103197

<p>Company <u>Coopers &amp; Lybrand</u></p> <p>Name <u>Herbert G. Vinnicombe</u></p> <p>Title _____</p> <p>Address <u>David Frost</u></p> <p>Phone: ( <u>215</u> ) <u>968</u> - <u>8530</u></p> <p>Fax: ( <u>610</u> ) <u>993</u> - <u>3800</u></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3" style="text-align: left; padding: 2px;">DISTRIBUTION:</th> <th style="text-align: left; padding: 2px;">Prog./Proj. ID _____</th> </tr> <tr> <th style="width: 33%; text-align: left; padding: 2px;">Action</th> <th style="width: 33%; text-align: left; padding: 2px;">Info.</th> <th style="width: 33%; text-align: left; padding: 2px;">By When</th> <th style="text-align: left; padding: 2px;">Describe Action-F/U</th> </tr> <tr> <td style="height: 40px;"></td> <td style="height: 40px;"><u>left</u></td> <td style="height: 40px;"><u>C&amp;L:</u></td> <td style="height: 40px;"></td> </tr> </table>	DISTRIBUTION:			Prog./Proj. ID _____	Action	Info.	By When	Describe Action-F/U		<u>left</u>	<u>C&amp;L:</u>	
DISTRIBUTION:			Prog./Proj. ID _____										
Action	Info.	By When	Describe Action-F/U										
	<u>left</u>	<u>C&amp;L:</u>											

17.03      No response.      Re: Trish...

18.03      left detailed VM.

19.03      Left 3300#.

26.03      Spoke with Trish + left message to call.

04.04      Not avail back a Monday.

☐ Continued over

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\* No names will be added without a completed change order and program manager approval.

Program Manager  
Authorization \_\_\_\_\_**CONTACT REPORT**

Continuation Company \_\_\_\_\_

Name \_\_\_\_\_

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Non Client/Prospect File: ☐ Media ☐ Financial ☐ Other \_\_\_\_\_

Contact Date: / /

INPUT

Staff: Init. \_\_\_\_\_ Init. \_\_\_\_\_ ☐ INPUT office ☐ Client Office ☐ Other \_\_\_\_\_

Date Written: 17103197

Company	SNI			DISTRIBUTION:		Prog./Proj. ID	
Name	Mike Philpot.			Action	Info.	By When	Describe Action-F/U
Title	Andy Chew x3856.						Profile
Address							
Phone:	(1-800) 225 - 1484 x3102						
Fax:	( ) -						

17.03 ~ left message.

{ 617 - 273 - 0480 }

18.03 ~ left message of VM.

19.03 ~ connected

more info. on integrators.  
call Andy.

20.03 Called Andy - left message.

04.04 Called - unavailable - no chance to leave message.

☐ Continued over

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Program Manager  
Authorization \_\_\_\_\_

**CONTACT REPORT**

Continuation

Company \_\_\_\_\_

Name \_\_\_\_\_



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Non Client/Prospect File: ☐ Media ☐ Financial ☐ Other \_\_\_\_\_

Contact Date: / /

INPUT PL  
Staff: Init. \_\_\_\_\_ Init. \_\_\_\_\_ ☐ INPUT office ☐ Client Office ☐ Other \_\_\_\_\_

Date Written: 17 / 03 / 97

Company <u>EDS / AT Kearney</u>	DISTRIBUTION:			Prog./Proj. ID
Name <u>Alan Hammersmith</u>	Action	Info.	By When	Describe Action-F/U
Title _____				
Address _____				
Phone: ( <u>972</u> ) <u>-605-1828</u>	<u>Home</u>	<u>609-275-8213</u>		
Fax: ( ) _____				

17.03 Left message.

18.03 Unavailable.

19.03 Left message..... left 3300 message #.

26.03 ~~Finally~~ Finally spoke to:

- Sent qs & -mail
- ch prices of add-ons ---
- ch names on list.

\$4k X....

cc



alan\_hammersmith@atkearney.com

Philip Morris

Acme Indus

Allison Ly Indianapolis

Frank

9.5	6.5	6.5	6.5	12	
✓ 3.0	3.0				

☐ Continued over

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Contact Date: / /

INPUT  
Staff: Init. \_\_\_\_\_ Init. \_\_\_\_\_ ☐ INPUT office ☐ Client Office ☐ Other \_\_\_\_\_ Date Written: 17, 12, 96

Company	DA CONSULTING	DISTRIBUTION:			Prog./Proj. ID
Name	BRETT SPECTOR	Action	Info.	By When	Describe Action-F/U
Title					
Address					
Phone: ( 713 ) 682 - 3393 (VM)					
Fax: ( ) -					

{ MOBILE 281-352-5716 }.

- 17.03.97. left message.
- 18.03.97. no answer.
- 19.03.97 Not back until next Monday, (24.03)
- 26.03.97 Out of office - left message .....
- 04.04.97 " - " .....

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**CONTACT REPORT**Continuation Company \_\_\_\_\_  
Name \_\_\_\_\_

INPUT®

1881 Landings Dr.  
Mountain View, CA 94043-0848  
Phone: (415)961-3300  
Fax: (415)961-3966

FAX TRANSMITTAL FORM

Date: \_\_\_\_\_ Urgent: ☐  
To: Name: **BRETT SPECTOR** Confidential: ☐  
Tel./Location: **DA CONSULTING**  
Co.: \_\_\_\_\_ Page 1 of **21**  
Fax No: **713-682-3396**  
From: Name: **PETER LINES**  
Subject: **SAP PROJECT**

Brett, Please find  
attached draft Questionnaire  
for your interest and  
comments.

I look forward  
to discussing it with you.

Regards

Peter Lines.

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☐ Professional Services, SI  
☐ Outsourcing, Processing, Network Services
- ☐ Industry \_\_\_\_\_

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Company \_\_\_\_\_

Name \_\_\_\_\_

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Staff: Init. PL Init. \_\_\_\_\_ ☐ INPUT office ☐ Client Office ☐ Other \_\_\_\_\_Date Written: 17/03/97

Company	DISTRIBUTION:			Prog./Proj. ID
	Action	Info.	By When	Describe Action-F/U
Name <u>ORIGIN</u> <u>allan Tibble</u>				
Title				
Address				
Phone: ( <u>908</u> ) <u>508 - 2519</u>				
Fax: (       )       -				

17.03 Left message.18.03R2/R3Particularly interested in R2.Something under license...from Germany.☐ Continued over

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☐ Industry \_\_\_\_\_  
☐ Software Products  
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☐ Outsourcing, Processing, Network Services

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Authorization \_\_\_\_\_

### CONTACT REPORT

Continuation

Company \_\_\_\_\_

Name \_\_\_\_\_



Tonye Galvan

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INPUT

Staff: Init. kg Init. \_\_\_\_\_ ☐ INPUT office ☐ Client Office ☐ Other \_\_\_\_\_Contact Date: 2/19/97Date Written: 2/19/97

Company <u>Plant Consulting</u>	DISTRIBUTION:		Prog./Proj. ID <u>SAP7</u>
Name <u>Chris Maynard</u>	Action <u>Peter L.</u>	By When <u>Nancy</u>	Describe Action-F/U <u>Call w/status</u>
Title _____			
Address _____			
Phone: ( <u>617</u> ) <u>768-0500</u>			
Fax: ( ) _____			

Chris wants to know status of SAP User project.

3 things.

• See: Revised QA:maynard@plant.com

Concerned about.....

• Note request... re request for names

• Production schedule. (Payment made)

name — e-mail.

12 clients

Way.....  
Montefiori.....US spell-checker.12 dozen  
∴ references

17.03.97 Left message.

18.03.97 Left VM.

19.03.97

(name + SAP-----)



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INPUT

Staff: Init. PL Init. \_\_\_\_\_ ☐ INPUT office ☐ Client Office ☐ Other \_\_\_\_\_Date Written: 17-03-97

Company	ERNST & YOUNG LLP			DISTRIBUTION:	Prog./Proj. ID
Name	TAMAS HEVIZI	Action	Info.	By When	Describe Action-F/U
Title	DIRECTOR SAP SERVICES				
Address					
Phone: ( 415 ) 951 - 3217					
Fax: ( ) -					

17-03 No answer

Rosemary Chili is his personal assistant

19-03 Left message to call 3300#.

26-03 Left message.

04-04 Spoke at last gas to him - will consider whether he wants to put any names into the hat.

☐ Continued over

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Program Manager  
Authorization \_\_\_\_\_

### CONTACT REPORT

Continuation

Company \_\_\_\_\_

Name \_\_\_\_\_

Preliminary Report

AN ANALYSIS OF THE KEY SUPPLIERS  
OF SAP RELATED SERVICES

Peter Lenes/Ky.I  
Found this in the  
Customs file  
thought it might  
be helpful —  
Jm

Submitted to

EDS

December 22, 1994

Prepared by

INPUT

Atrium at Glenpointe  
400 Frank W. Burr Boulevard  
Teaneck, NJ 07666

201-801-0050  
Fax: 201-801-0441



# An Analysis of the Key Suppliers of SAP Related Services

## I. Objectives and Scope

Supply information on the market and competitive position of four key suppliers of SAP related services (Andersen Consulting, Price Waterhouse, Deloitte & Touche and ICS. This information will include an overview of current SAP installations and an assessment of potential opportunities in key industry segments.

The questions that the study will address are listed below:

- What is the distribution of R2 and R3 installations by geography and vertical market?
- Who are high profile SAP clients by geography and vertical market? Are they fully installed or still in progress? Which customer business units or functions are involved?
- What is the market share for SAP-related services by the leading services suppliers, broken out by
  - R2 and R3 projects
  - Projects completed and those in process
  - U.S. and international
  - Note: R3-related information is more important.
- What are the major services now supplied by the four key competitors? (E.g., design, integration, modification, installation, support.) If there are gaps in services offered, does the vendor plan to add them?
- What is each firm's market strategies and sales process? How are leads generated and followed up? Is there a dedicated sales force? Are standard proposal templates used?
- What pricing approaches are used (e.g., fixed, time and materials, contingency)?
- What are these firms' relationships with hardware vendors (concerning SAP)?

- What is a typical SAP engagement profile for each of the four suppliers (number of staff, project duration, services provided, organization, etc.)?
- Are standard process models used, for example by function/application or industry? What development tools are used?
- How many consultants does each firm have that is experienced in SAP? How are they rated or classified? To what extent is the experience derived from formal training or OJT?
- Do these suppliers use "centers of excellence" or analogous units? How are they utilized? What does SAP contribute?
- What is SAP's strategy and approach to working with services providers?
- What does each firm see as its special strengths in this area? Who does each firm see as its major competition in this area?
- To what extent do these firms plan to change their approach or offerings?
- How do customers select vendor-supplied R3-related services? This includes:
  - Why are consultants used and for what type of services?
  - What are the principal vendor selection criteria, including (but not limited to)
    - Certification
    - Number of experienced people available
    - Specific people assigned to customer
    - References
    - Experience in customer's industry or process
    - Price and pricing approach
    - Experience in functional area (e.g., design, modification, interfacing, training, installation)
  - What are the comparative ratings of service providers?
  - How does the selection process work?
- What is INPUT's assessment of each firm, now and in the future?
- What is INPUT's assessment of the major opportunities for supplying SAP-related services, e.g., by industry segment, by process, by application, etc.?



## II. Executive Summary

### A. Overview

Detailed answers to questions of EDS were obtained from the four key suppliers and are listed in Section III by supplier and by question. A summary of information collected from user interviews is provided in section IV together with conclusions based on the user data. Overall conclusions that INPUT has formed on the basis of the study are discussed below.

### B. Conclusions

SAP work provides long, profitable assignments for the four key suppliers and other vendors. Users report decision times averaging 8.6 months for R3 projects and implementation times in excess of 17 months for R3 projects. R2 projects take somewhat less.

The trend is for R2 projects to decrease. Most prospects are considering R3 installations. The ratio of R3 to R2 projects among a sample of users was 10:3.

Support is needed in planning for and using SAP software according to a high percentage of both users who utilized support vendors and those who did not. Reengineering or restructuring of business must be done, and the use of SAP software products requires a high level of expertise. According to users, the reason for using SAP software is that it provides a truly integrated and full set of business functions, particularly for manufacturing. Several R3 users also note that it provides the only fully integrated set of software products for client/server products.

In the sample of users, Andersen Consulting was the leading vendor in assignments, perceived strengths, support personnel, and the ability to gain "pull through revenue" among the key suppliers. ICS and Price Waterhouse ranked about the same in number of assignments and perceived strengths. However, ICS and PW were ranked higher on the average than Andersen in terms of knowledge and capabilities to support R2 and R3 work.

A group of vendors including IBM and SHL are trying to gain more strength in SAP software so that they can reach the level of the key suppliers.

Users report on a very consistent basis that support providers need a high level of knowledge of SAP software, the ability to run projects involved with this software, and sufficient resources to respond rapidly to needs and opportunities.

Industry knowledge is considered valuable according to users, but SAP knowledge is more important.

The key SAP support vendors state their SAP strength in a way that reassures SAP prospects but that can be misleading. They describe their strength to staff projects in terms of the core number of personnel that fully know R3 (or R2) plus the people who can work on this type of complex project. When specifically asked about the core strength, they will provide a smaller number.

Through  
the  
{ The key vendors attempt to gain "pull through" revenue by gaining the reengineering work involved with a SAP assignment (vendors other than the key vendors are used in some), providing SAP overview training including client/server training, hardware advice/procurement, performing add-on projects, and persuading users to employ only their staff and not to hire staff from a contract vendor to use together with their support staff. Users try to save money by using a mix of staff from the key vendor and professional services firms. Andersen may add as much as 50% to revenue by these means, PW over 35%, D & T and ICS over 15%.

As part of their sales strategies, support vendors utilize contacts with SAP and industry associations to obtain leads as well as presentations and support material. (A disk that PW uses is included with this report.) All key vendors try to uncover opportunities through a broad brush contact process rather than a dedicated sales force. ICS is more dedicated since it does mostly SAP work.

Users report that presentations, assessment of SAP strengths and resources, reference checking in their industries or related ones, assurance that knowledgeable people will be assigned, and price are selection factors. If it isn't possible to decide among vendors, multiple vendors may be used (8 of 23 projects using vendors used multiple vendors.)

#### C. Assessment of Support Providers and Potential Business

For the near term, Andersen will continue to be dominant. They come in contact with more leads through their practice. They are active in the industries that have high SAP usage (chemicals, consumer goods, oil and gas). They have more trained SAP resources. They are recognized for their SAP and industry strength. They are addressing opportunities in a more organized way. Most users feel they are a good choice for aid.

Price Waterhouse will not attack Andersen's leadership. They will be in second, third or fourth place. They are not looking for leads everywhere as intensely as Andersen is. They don't attack situations in the organized way Andersen does. In the user survey, PW had one assignment as the lone vendor in charge of a project and 5 R2 and R3 assignments as part of a team. Andersen had 6 lone projects and 3 as part of a team. PW is recognized for their SAP and industry knowledge and

their resource size and make good presentations on SAP; so they will continue to get business.

Deloitte & Touche has knowledge of SAP software and industries where it can be used. They have also been seeking leads and gaining business. They have often wound up as part of a vendor team so they are not seeking business as aggressively as Andersen. They have also obtained business from SAP to support sites. They will continue to be in the first 3 or 4 vendors, but could fall to a lower position since some of their users claim that they are not keeping their strength up to date.

ICS has gained recognition as having one of the highest if not the highest level of knowledge of SAP. (They are rated highest among the 4 vendors.) They are also mentioned as a company dedicated to SAP. They are growing extremely rapidly. However, ICS may not be able to support or manage an effort to provide the resources necessary to overtake Deloitte & Touche or Price Waterhouse in total SAP business. An alliance with a strong IT firm could aid them to seize their current opportunity.

Users stress that the oil and gas, chemical, consumer goods and high technology discrete industries are good targets for SAP software. Information from vendors confirms this. Until these industries are saturated, they present opportunities. However, discrete and process manufacturing segments not yet addressed and some new targets such as wholesale and financial industries, where downsizing and use of client/server systems on an enterprise wide basis are important, could also provide opportunities. Since SAP software has many non manufacturing functions, it can be used in a variety of industries. Sales activities should address opportunities in many industries as the key vendors, and particularly Andersen, are doing.

Users stress that vendors should have a full range of consulting and development services in support of SAP software, and key support vendors report that they have full support or are trying to fill gaps in service.

### **III. Information from Key SAP Support Providers**

Information from the support providers is provided in two sets of exhibits that follow. The first set contains the answers to questions listed in Section I, in order by support vendor. The second set has the information sorted by question, so that the answers from all four vendors can be compared for that question.

The information is based on reports from fully implemented installations. (Forty percent of users surveyed said their installations were not fully implemented.) It is also based upon the viewpoint of vendor contacts, who made judgements on industries, locations and what was fully installed.

## Installation Distribution

## Geography

## R/2

Europe & Africa	25
Asia/Pacific	7
Other	12
United States	30

## R/3

Europe & Africa	22
Asia/Pacific	14
Other	8
United States	22

## Vertical Markets

## R/2

Chemicals	4
Consumer Goods	21
High Technology	20
Oil & Gas	9
Pharmaceuticals/Health Care	10

## R/3

Chemicals	7
Consumer Goods	21
High Technology	19
Oil & Gas	4
Pharmaceuticals/Health Care	10
Financial	2
Government	
Public Utilities	2
Entertainment/Media	1

## High Profile Clients

See Attached

## Market Share

## R/2

10%

## R/3

17%

## Project Status (In-progress)

12%

## Geography

## U.S.

23%

## International

27%

Services (E.g., design, integration, modification, installation, support)	<ul style="list-style-type: none"><li>• Andersen Consulting is a full-service provider for SAP implementations.</li><li>• They note their abilities in the front-end planning and design (with higher billable rates) and can work with clients who want to participate actively in the implementation. That is, Andersen and the client may share project management roles and the client may supply more of the workers. (These workers will, most likely, be trained by Andersen.)</li></ul>
Does vendor plan to fill service gaps?	<ul style="list-style-type: none"><li>• Vendor has no service gaps, but to avoid these gaps they may need to temporarily relocate people. To avoid that, and to garner higher billable rates, more consultants are being trained in more areas of SAP implementations.</li></ul>
Marketing and sales process	
Is there a dedicated SAP sales force?	<ul style="list-style-type: none"><li>• No. Each region is responsible for their own sales.</li></ul>
How are leads generated and followed up?	<ul style="list-style-type: none"><li>• Vendor's image and recognition, in addition to national and international advertising in major business publications (e.g., their Best Practices ads in Business Week) draw many responses.</li><li>• Leads are followed up by SAP Practice Partners in each region.</li></ul>
Are standard proposal templates used?	<ul style="list-style-type: none"><li>• Yes, although vendor seeks to customize each to add value when they have the opportunity.</li></ul>
What pricing approaches are used?	<ul style="list-style-type: none"><li>• Time and materials and fixed price are used, depending on the services offered and the extent to which project unknowns are quantifiable. Note: SAP's product portion averages \$1M.)</li></ul>
What are the relationships with hardware vendors?	<ul style="list-style-type: none"><li>• Andersen has extensive relationships with all major hardware vendors, sharing technical information and, through their Technical Competence Centers, working jointly on hardware/software interface issues.</li></ul>
What is a typical SAP engagement?	<ul style="list-style-type: none"><li>• Projects are very complex; it is not easy to install SAP. Andersen confirms that "typical" projects usually last 12-18 months and involve up to 12 people.</li></ul>
Are standard process models used?	<ul style="list-style-type: none"><li>• Electronic templates are available for key industries, including discrete manufacturing, chemicals, electronics, and consumer goods. They also have a full set of business processes documented and, for R/3, pre-configured data tables.</li></ul>

What development tools are used?	<ul style="list-style-type: none"> <li>Andersen has an SAP implementation model, based on their packaged software methodology, that self-documents the project as it is being designed by the team. They use this tool to demonstrate their approach, share tips and ideas from other implementations, and capture the unique issues of the client.</li> </ul>
Number of consultants who are experienced in SAP?	<ul style="list-style-type: none"> <li>Approximately 800 experienced consultants (actual project work), many of these in the U.S. working on R/3 projects. —</li> </ul>
How are they rated or classified?	<ul style="list-style-type: none"> <li>Andersen ultimately classifies workers according to the billable rates they can command. The number of actual SAP projects completed is a key criterion, followed by the amount and type of training.</li> </ul>
To what extent is the experience derived from formal training vs OJT?	<ul style="list-style-type: none"> <li>All consultants have had formal training and most have or are getting on-the-job experience. Also, experiential knowledge is shared via a corporate-wide network using Lotus Notes (called Knowledge Exchange).</li> </ul> <p>Andersen plans to train another 1,100 consultants in the U.S. over the next 8 months.</p>
Do suppliers use "centers of excellence" or analogous units?	<ul style="list-style-type: none"> <li>Andersen has moved away from the COE to their own Regional Competence Centers.</li> </ul>
How are they utilized?	<ul style="list-style-type: none"> <li>The regional centers are used as a venue for exchange among SAP, Andersen, and the client. For example, these three parties might do joint resource planning at the center or exchange information specific to the client.</li> <li>Each center is managed by an Andersen consultant responsible for the relationship with SAP for that region.</li> </ul>
What does SAP contribute?	See above.
What is SAP's strategy and approach in working with service providers?	<ul style="list-style-type: none"> <li>SAP very non-committal on vendor criteria or qualifications. SAP personnel would only state that named vendors were qualified and that non-SAP issues should prevail.</li> <li>SAP offers a Partner Alliance, complete with awards for customer satisfaction. This program has both contractual and marketing components.</li> </ul>

What does firm see as special strengths?

- Worldwide presence
- The ability to field strong teams throughout the U.S.
- A repository of best practices (i.e., pre-configured SAP software) that is the result of a previous client's implementation plus added value from Andersen.
- The ability to get a rapid implementation through use of their pre-configured software templates.
- A strong education practice throughout the firm, some of which is focused on SAP.

Who do they believe are their competitors?

- Andersen mentions the Big Six; They also feel companies such as ICS are in a different business.

Plans to change approach or offerings?

- Thrust is on developing more industry templates and increasing the number of consultants qualified at higher billable rates.



## High Profile Clients of Andersen Consulting

11

High Profile Clients	Geography	Vertical Market	Business Unit(s)	Status of Project
Colgate	U.S.	Consumer Goods	Fin., Mfg., Dist.	In progress
Exxon	U.S.	Oil & Gas	Dist.	Completed
Apple Computer	U.S.	High Tech	Fin., Mfg., Dist., HR	Completed
Foothills Pipeline	U.S.	Oil & Gas	Dist.	Completed
DRT	Europe	Manufacturing	Mfg.	Completed
Warren Petroleum	U.S.	Oil & Gas	Dist.	Completed
Ciba Geigy	U.S.	Chemicals	Mfg.	In progress
Royal LePage	Europe	Business Services	Fin., HR	Completed
Shindler Elevator	U.S.	Manufacturing	Mfg.	Completed
Schering-Plough	U.S.	Pharmaceuticals	Mfg.	Completed
Foxmeyer	U.S.	Distribution	Fin.	In progress

## Installation Distribution

## Geography

## R/2

Europe &amp; Africa 18

Asia/Pacific 2

Other 8

United States 17

## R/3

Europe &amp; Africa 13

Asia/Pacific 2

Other 3

United States 10

## Vertical Markets

## R/2

Chemicals 13

Consumer Goods 14

High Technology 7

Oil &amp; Gas 8

Pharmaceuticals/Health 2

## Care

## R/3

Chemicals 7

Consumer Goods 14

High Technology 6

Oil &amp; Gas 5

Pharmaceuticals/Health 5

## Care

## Financial

## Government

## Public Utilities

## Entertainment/Media

## High Profile Clients

See Attached

## Market Share

R/2 6%

R/3 7%

Project Status (In-progress) 8%

## Geography

U.S. 14%

International 17%

Services (E.g., design, integration, modification, installation, support)

- Vendor has full-service capabilities. Many engagements, however, seem focused on up-front planning.

Does vendor plan to fill service gaps?

- Plans are focused on developing COEs for other industries and moving their skills in enabling technologies to SAP implementations.

Marketing and sales process

Is there a dedicated SAP sales force?

- No. Each region has SAP Practice Managers responsible for selling.

How are leads generated and followed up?

- Leads mostly generated internally by other consultants.

Are standard proposal templates used?

- Yes, to initiate an engagement. Then vendor prepares a "strawman" planning document for the actual project.

What pricing approaches are used?

- Pricing depends on the services to be provided: full-service is fixed and individual services tend to be time and materials.

What are the relationships with hardware vendors?

- Vendor has relationships with IBM, Hewlett-Packard, Digital, and Sun for the supply of hardware to SAP projects. Sharing of technical information is most frequent activity.

What is a typical SAP engagement?

- Typical project takes 1-1.5 years. Critical path functions for a "typical" implementation are:
  - Scoping 4-6 weeks
  - As-Is Model 4-8 weeks
  - Reengineering 12-18 weeks
  - Core Prototyping 20-28 weeks
  - Pilot & Imp. 12-20 weeks
- Typical Staffing:
 

Resource	Client	External
Proj Mgr.	1	1
Integrator	1	.5
Funct. Teams	14-20	3-4
Tech. Integ.	1	
Support	3-5	1
Total	20-28	6-7

Are standard process models used?

- Vendor has wrapped SAP inside their life cycle methodology.
- They have industry templates for chemicals, process and discrete manufacturing, packaged goods, and others.

<b>What development tools are used?</b>	<ul style="list-style-type: none"> <li>• They provide tools for scripting, prototyping, etc.</li> <li>• 4FRONT is their SAP implementation methodology; it includes tools for project scoping and planning, business process redesign, prototyping and implementation.</li> <li>• Analyzer tool is incorporated in the implementation methodology.</li> </ul>
<b>Number of consultants who are experienced in SAP?</b>	<ul style="list-style-type: none"> <li>• 300 in North America, 100 in Europe, 40 in Africa, and 50 in Asia/Pacific (includes Australia)</li> </ul>
<b>How are they rated or classified?</b>	<ul style="list-style-type: none"> <li>• Most are rated by the amount of experience (industry and SAP) they have (most are European) and, secondarily, their ability to be a "good" overall consultant.</li> </ul>
<b>To what extent is the experience derived from formal training vs OJT?</b>	<ul style="list-style-type: none"> <li>• Vendor offers a 6-8 week in-house training program, but mostly hires experienced people.</li> <li>• Vendor finds it easy to transport experience from project to project.</li> </ul>
<b>Do suppliers use "centers of excellence" or analogous units?</b>	<ul style="list-style-type: none"> <li>• Yes. Vendor uses the COE as a centerpiece of their qualification. This is D&amp;T's only major software vendor relationship.</li> <li>• In 1994 they established the Consumer Packaged Goods COE as well as the High Tech COE and a Global COE.</li> </ul>
<b>How are they utilized?</b>	<ul style="list-style-type: none"> <li>• D&amp;T's COE is a central hub for all SAP activities, including product/program management, implementation methodology, marketing/client services, practice coordination, recruiting and training, technology and alliance relationships, and engagement staffing.</li> </ul>
<b>What does SAP contribute?</b>	<ul style="list-style-type: none"> <li>• SAP's Center of Expertise offers access to broad functional skills, industry-specific experience, and SAP-specific training in their implementation methodology and ImplementationWare (IMW) tool.</li> <li>• SAP also offers an SAP Advisory Team to D&amp;T's COE.</li> </ul>
<b>What is SAP's strategy and approach in working with service providers?</b>	See comments elsewhere
<b>What does firm see as special strengths?</b>	<ul style="list-style-type: none"> <li>• One of four winners of Award of Excellence, a customer satisfaction survey sponsored by SAP.</li> <li>• Claims to provide more senior-level personnel on SAP projects; vendor claims other vendors have a 1:6 ratio while they have a 1:3 ratio.</li> <li>• Experience with implementing SAP, especially configuration and technical assistance through the COE.</li> </ul>
<b>Who do they believe are their competitors?</b>	<ul style="list-style-type: none"> <li>• D&amp;T mentioned Price Waterhouse.</li> </ul>

## High Profile Clients of Deloitte & Touche

High Profile Clients	Geography	Vertical Market	Business Unit(s)	Status of Project
Albemarle	United States	Chemicals	Fin., Dist.	In progress
American Cyanamid	United States	Agricultural Chemicals	Dist.	In progress
Andrew Corporation	United States	Electronics	Sales, Dist.	Completed
Berlex Laboratories	United States	Pharmaceuticals	Fin., Dist., Mfg., HR	In progress
Cadbury Schweppes	United States	Food/Consumer Products	Fin., Dist.	In planning
Cooper Oil Tool	United States	Oil & Gas	Fin.	Completed
Digital Equipment	United States	High Technology	Fin., Sales, Dist., Mfg.	In progress
Dow Chemical	United States	Chemicals	Mfg.	Completed
Goodyear	United States	Automotive	Dist.	In progress
Haarmann & Reimer (Miles)	United States	Chemicals	Mfg.	On-going
Heinz	Canada	Food/Consumer Products	Sales, Dist.	In progress
Hitachi Data Systems	United States	Electronics	Mfg.	Completed
Hubbell	United States	Electronics	Fin.	Completed
Hunt-Wesson	United States	Food/Consumer Products	Multiple (BPR)	In progress
Kyocera	United States	Electronics	Sales., Dist., Mfg., Fin.	In progress
Laudmark Graphics	United States	Software	Fin., Sales., Dist., Mfg.	In progress
Marion Merrell Dow	United States	Pharmaceuticals	Mfg.	In progress
Merisel	United States	Distribution	Sales, Dist., Fin.	Completed
Mitsubishi	United States	Manufacturing	Fin., Sales, Dist.	In progress
Monsanto	United States	Chemicals	Dist.	In planning
Nestle	United States	Food/Consumer Products	Fin.,	Completed
Petro Canada	Canada	Chemicals	Mfg., Sales, Dist.	In progress
Schering-Plough	United States	Pharmaceuticals	Dist., Fin., Mfg.	In progress
Steelcase	United States	Office Products	Sales, Dist.	Completed
Syntex	United States	Pharmaceuticals	Multiple (BPR)	Completed

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<b>Plans to change approach or offerings?</b>	<ul style="list-style-type: none"><li>• Near-term focus is on growing the business as it currently exists, especially in expanding the COE and enhancing D&amp;T's ability to find and attract experienced SAP consultants.</li></ul>
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## Installation Distribution

## Geography

## R/2

Minimal R/2 activity, but in these industries:

Europe &amp; Africa

X

Asia/Pacific

Other

X

United States

X

## R/3

Europe &amp; Africa

4

Asia/Pacific

0

Other

1

United States

11

## Vertical Markets

## R/2

Minimal R/2 activity

Chemicals

X

Consumer Goods

X

High Technology

X

Oil &amp; Gas

X

Pharmaceuticals/Health

Care

## R/3

Chemicals

2

Consumer Goods

6

High Technology

5

Oil &amp; Gas

Pharmaceuticals/Health

3

Care

Financial

Government

Public Utilities

Entertainment/Media

## High Profile Clients

See Attached

## Market Share

## R/2

Minimal R/2 business

## R/3

3%

Project Status (In-progress)

4%

## Geography

U.S.

8%

International

2%

Services (E.g., design, integration, modification, installation, support)

- Vendor provides most services, but specializes on the technical issues of integration. Their approach is more one of “body shop” than “full service.”

Does vendor plan to fill service gaps?

- Current plans are to focus on software add-ons, first, and develop full-service capabilities as opportunities arise.
- ICS does have a relationship with ARMS, a NJ-based systems integrator specializing in data collection systems.

Marketing and sales process

Is there a dedicated SAP sales force?

- No. Sales is managed by the two regional managers and is supported by a Partner in charge of Sales and Marketing.

How are leads generated and followed up?

- Some leads from SAP.

Are standard proposal templates used?

- No. Vendors' limited experience and “body shop” format requires more customized proposals.

What pricing approaches are used?

- Generally, time and materials for services. Products are fixed price. Cost-plus is an option infrequently used.

What are the relationships with hardware vendors?

- Vendor has no strong links to any hardware vendors.

What is a typical SAP engagement?

- Engagements are usually “body shop,” consulting, bundled software, database, implementation, and financing.
- Client training for knowledge transfer is a key offering.

Are standard process models used?

- Generally no. Vendor is developing the experience to support standard models. Note, however, their product offering in distribution.

What development tools are used?

- ICS offers Universal Portable Interface for all SAP platforms. UCP provides a consistent interface to EDI and non-EDI requirements.
- ICS FastTrack is an implementation system for project scoping and planning, assessment and configuration, core configuration, fine-tuning, testing and system delivery. Issue Management is a tool used to analyze and solve issues which are called out into a database.
- ARIS-Toolset (an SAP-supported, IDS-developed product) is a business modeling tool that employs industry-specific built-in business models. It is a part of FastTrack. ICS is a value-added reseller of IDS' ARIS in Mexico, plans to expand this relationship to Europe and the Far East, and is working with IDS on the



## High Profile Clients of International Consulting Solutions

High Profile Clients	Geography	Vertical Market	Business Unit(s)	Status of Project
Applied Materials	United States	Manufacturing	Mfg.	In progress
AST Research	United States	High Tech	Dist.	In progress
Autodesk	United States	High Tech	Dist.	In progress
Ciba Geigy (4 divisions)	Europe & Africa, U.S.	Chemicals	Mfg., Dist.	In progress
Convex Computer	United States	High Tech	Dist.	In progress
Cott Beverages	United States	Foods/Consumer Goods	Dist.	In progress
DEC	United States	High Tech	Fin.	In progress
James River	United States	Manufacturing	Pur., Dist.	In progress
Lennox	United States	Manufacturing	Mfg.	In progress
Merisel	United States	Distribution	Sales, Dist.	In progress
Motorola	United States	Manufacturing	Info. Tech. (Network)	In progress
Nestle	Europe & Africa	Foods/Consumer Goods	Sales, Mfg.	In progress
Petro Canada	Canada	Chemicals	Fin.	In progress
Philip Morris	United States	Foods/Consumer Goods	Dist.	In progress
Seattle Times	United States	Manufacturing	Dist.	completed
St. Lawrence Cement	Canada	Manufacturing	Mfg.	In progress

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 development of future products.
 

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**Number of consultants who are experienced in SAP?**

- 404 in the world, mostly in the U.S.

**How are they rated or classified?**

- SAP background is key. Also ICS looks for employees who share their core beliefs for customer satisfaction and are dedicated to finding new ways to make SAP perform more efficiently.

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**To what extent is the experience derived from formal training vs OJT?**

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- ICS relies mostly on previous experience, but does offer training on ICS-specific methodologies and tools.
- 

**Do suppliers use "centers of excellence" or analogous units?**

- No, but ICS is a certified SAP partner.

**How are they utilized?**

**What does SAP contribute?**

- SAP uses Intel's ProShare videoconferencing to provide interactive, face-to-face support, especially to customers.
  - Vendor can also use the Jumpstart program that allows customers to send project teams to SAP for training.
- 

**What is SAP's strategy and approach in working with service providers?**

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See comments elsewhere

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**What does firm see as special strengths?**

- OpenScan/1 is a software add-on to SAP software that integrates goods movement information with SAP using data collection and radio frequency technology.
- ICS feels their history with SAP (4 founders were consultants with SAP for some time) and their exclusive focus on SAP are both assets.
- they also tout their "fast and easy" implementations and quick knowledge transfer (limiting "long-term client dependency")

**Who do they believe are their competitors?**

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- Big Six
- 

**Plans to change approach or offerings?**

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- No plans to move from software add-ons, expanding service offerings slowly, and enhancing relationships with key integrators.
-

## Installation Distribution

## Geography

## R/2

Europe & Africa	23
Asia/Pacific	8
Other	10
United States	20

## R/3

Europe & Africa	17
Asia/Pacific	10
Other	6
United States	17

## Vertical Markets

## R/2

Chemicals	12
Consumer Goods	16
High Technology	18
Oil & Gas	7
Pharmaceuticals/Health Care	8

## R/3

Chemicals	5
Consumer Goods	18
High Technology	17
Oil & Gas	2
Pharmaceuticals/Health Care	8

## Financial

New market focus, installs in progress

## Government

New market focus, installs in progress

## Public Utilities

New market focus, installs in progress

## Entertainment/Media

New market focus, installs in progress

## High Profile Clients

See Attached

## Market Share

R/2

8%

R/3

13%

## Project Status (In-progress)

18%

## Geography

- U.S. • 17% of U.S. market. Vendor is stronger on the East coast, primarily because that's where their imported (European) talent resides. This region (Philadelphia to Florida) is where the practice started in 1988.

## International

19%

## Services (E.g., design, integration, modification, installation, support)

- Vendor is only accepting jobs that are full service. They offer an SAP implementation lifecycle consisting of, using their terms, analysis (scoping, project team training, data planning), design (prototyping and specification), construction (customization, interfaces, environment, training, testing), and implementation.

## Does vendor plan to fill service gaps?

- Vendor offers a full service and plans to continue this strategy, reducing work for clients with limited service needs.

## Marketing and sales process

## Is there a dedicated SAP sales force?

- No. Sales are the responsibility of the SAP Practice Manager in each region (Northeast, Southeast, Great Lakes, Central, and West)

## How are leads generated and followed up?

- Leads are generally created internally, although there is some amount of "blue birds." Company is very selective in that they look for full-service partnering opportunities in their target industries and in geographic areas where they have resources available.

## Are standard proposal templates used?

- Vendor tries to standardize but reports that rapid changes in their offerings makes this very difficult.

## What pricing approaches are used?

- Prefers fixed price for full SAP implementations but does work on time and materials in areas of many unknowns (e.g., original development work).

## What are the relationships with hardware vendors?

- Vendor works with all types of equipment; HP, IBM, and DEC were specifically mentioned.
- Only vendor to offer "turnkey" solution.

## What is a typical SAP engagement?

- Most projects involve 200-300 end users; they do have one site with 1,000 users and several under way in the 3,000-5,000 range.
- Vendor notes that typical projects can have a run rate of \$20,000/day with a duration of 12-18 months.

<b>Are standard process models used?</b>	<ul style="list-style-type: none"> <li>• Vendor has developed a number of industry templates, pre-configured, functioning implementation, including common practices and terminology.</li> </ul>
<b>What development tools are used?</b>	<ul style="list-style-type: none"> <li>• Vendor has adapted their packaged software methodology to the SAP product. They also offer an R/3 Toolkit of application software to accelerate implementation of R/3 in client-server environments.</li> <li>• Vendor also employs their Change Integration and Business Process Transformation methodologies as an umbrella approach. These latter two are usually a part of larger reengineering efforts.</li> </ul>
<b>Number of consultants who are experienced in SAP?</b>	<ul style="list-style-type: none"> <li>• Over 500 worldwide with 386 in the U.S., up from 16 when they started in 1988.</li> </ul>
<b>How are they rated or classified?</b>	<ul style="list-style-type: none"> <li>• Employees classified by seniority; SAP employees have 1-15 years of SAP experience.</li> </ul>
<b>To what extent is the experience derived from formal training vs OJT?</b>	<ul style="list-style-type: none"> <li>• Vendor provides own six weeks training program (they did use SAP's school, but pulled out years ago). They plan to invest \$3M to train 200 SAP specialists and give another 200 an SAP overview.</li> <li>• They also run IT KnowledgeNet using Lotus Notes. There are six SAP Design Centers around the U.S. that share information. Employees also have access to the corporate R&amp;D Center information in Menlo Park, CA. Finally, a group in Bethesda, MD looks at performance and technology issues a number of technologies.</li> </ul>
<b>Do suppliers use "centers of excellence" or analogous units?</b>	<ul style="list-style-type: none"> <li>• Vendor was part of a joint venture with SAP for the Center of Expertise in Philadelphia but is now out of that effort.</li> <li>• Vendor prefers referencable accounts but all of them are either in development or are undersized for prospective customers.</li> <li>• Vendor does have an R/3 Design Center in Santa Monica, CA for prototyping SAP software.</li> </ul>
<b>How are they utilized?</b>	<ul style="list-style-type: none"> <li>• R&amp;D center participates in beta tests for SAP. They also converted SAP to Japanese. These relationships are made clear in sales literature and presentations.</li> </ul>
<b>What does SAP contribute?</b>	<ul style="list-style-type: none"> <li>• See above.</li> </ul>
<b>What is SAP's strategy and approach in working with service providers?</b>	<ul style="list-style-type: none"> <li>• SAP offers a Partner Alliance, complete with awards for customer satisfaction. This program has both contractual and marketing components.</li> </ul>

What does firm see as special strengths?

- Understanding of and ability to implement underlying architectures.
- Also, vendor believes that they are able to field stronger teams.
- Worldwide presence.
- Vendor won the 1994 SAP Award of Excellence.
- The Design Centers provide rapid SAP implementations through industry-specific templates. These centers also offer benchmarking, R/2 and R/3 connectivity, DE, and technical platform characteristics and capabilities..
- Only Big Six to be a Certified SAP trainer.

Who do they believe are their competitors?

- Andersen Consulting and ICS

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Plans to change approach or offerings?

- Vendor may develop approaches to migrate R/2 users to R/3, a problem that could take SAP at least five years to solve.
  - Also, more stringent project selection criteria to target full-service projects with add-on opportunities.
-

# High Profile Clients of Price Waterhouse

High Profile Clients	Geography	Vertical Market	Business Unit(s)	Status of Project
DuPont	U.S.	Chemicals	Fin., Mfg., Dist., HR	R/2 completed, R/3 begun
General Mills	U.S.	Consumer Goods	Mfg., Dist.	Completed
Hercules	U.S.	Chemicals	Fin., Mfg., Dist., HR	Completed
BMW	U.S.	Consumer Goods	HR	Completed
BOSE	U.S.	Consumer Goods	Fin., Mfg., Dist.	Completed
Coors	U.S.	Consumer Goods	Dist.	Completed
Intel	U.S.	Electronics	Mfg., Dist.	In progress
M/A-COM	U.S.	Manufacturing	Fin., Mfg., Dist.	Completed
SAIC	U.S.	Manufacturing	Mfg.	Completed
Mobil Oil	Australia	Oil & Gas	Mfg.	Completed
Siemens	Germany	Manufacturing	Mfg., HR	Completed
Kodak	UK	Chemicals	Fin., Mfg., Dist.	Completed
SAP	South America	Software	Distribution	Completed
BASF	Asia/Pacific	Chemicals	Fin., Mfg., Dist.	Completed
Hoechst	Japan	Chemicals	Manufacturing	Completed
Bristol-Myers Squibb	U.S.	Pharmaceuticals	Fin.	In progress
Merck	U.S.	Pharmaceuticals	Fin., Dist., HR	In progress

Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse
Installation Distribution				
Geography				
R/2			Minimal R/2 activity, but in these industries:	
Europe & Africa	25	18	X	23
Asia/Pacific	7	2		8
Other	12	8	X	10
United States	30	17	X	20
R/3				
Europe & Africa	22	13	4	17
Asia/Pacific	14	2	0	10
Other	8	3	1	6
United States	22	10	11	17
Vertical Markets				
R/2			Minimal R/2 activity	
Chemicals	4	13	X	12
Consumer Goods	21	14	X	16
High Technology	20	7	X	18
Oil & Gas	9	8	X	7
Pharmaceuticals/Health Care	10	2		8



Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse
R/3				
Chemicals	7	7	2	5
Consumer Goods	21	14	6	18
High Technology	19	6	5	17
Oil & Gas	4	5		2
Pharmaceuticals/Health Care	10	5	3	8
Financial	2			New market, installs in progress
Government				New market, installs in progress
Public Utilities	2			New market, installs in progress
Entertainment/Media	1			New market, installs in progress
High Profile Clients	See Attached			

Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse	
Market Share					28
R/2	10%	6%	Minimal R/2 business	8%	
R/3	17%	7%	3%	13%	50
Project Status (In-progress)	12%	8%	4%	18%	62
Geography					total 62%
U.S.	23%	14%	8%	17%	
				Vendor is stronger on the East coast, primarily because that's where their imported (European) talent resides. This region (Philadelphia to Florida) is where the practice started in 1988.	
International	27%	17%	2%	19%	total 65

Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse
Services (E.g., design, integration, modification, installation, support)	<p>Andersen Consulting is a full-service provider for SAP implementations. They note their abilities in the front-end planning and design (with higher billable rates) and can work with clients who want to participate actively in the implementation. That is, Andersen and the client may share project management roles and the client may supply more of the workers. (These workers will, most likely, be trained by Andersen.)</p>			<p>Vendor is only accepting jobs that are full service. They offer an SAP implementation lifecycle consisting of, using their terms, analysis (scoping, project team training, data planning), design (prototyping and specification), construction (customization, interfaces, environment, training, testing), and implementation.</p>
Does vendor plan to fill service gaps?	<p>Vendor has no service gaps, but to avoid these gaps they may need to temporarily relocate people. To avoid that, and to garner higher billable rates, more consultants are being trained in more areas of SAP implementations.</p>	<p>Vendor has full-service capabilities. Plans are focused on developing COEs for other industries and moving their skills in enabling technologies to SAP implementations.</p>	<p>Current plans are to focus on software add-ons, first, and develop full-service capabilities as opportunities arise. ICS does have a relationship with ARMS, a NJ-based systems integrator specializing in data collection systems.</p>	<p>Vendor offers a full service and plans to continue this strategy, reducing work for clients with limited service needs.</p>

Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse
Marketing and sales process				
Is there a dedicated SAP sales force?	No. Each region is responsible for their own sales.	No. Each region has SAP Practice Managers responsible for selling.	No. Sales is managed by the two regional managers and is supported by a Partner in charge of Sales and Marketing.	No. Sales are the responsibility of the SAP Practice Manager in each region (Northeast, Southeast, Great Lakes, Central, and West)
How are leads generated and followed up?	Vendor's image and recognition, in addition to national and international advertising in major business publications (e.g., their Best Practices ads in Business Week) draw many responses. Leads are followed up by SAP Practice Partners in each region.	Leads mostly generated internally by other consultants.	Some leads from SAP.	Leads are generally created internally, although there is some amount of "blue birds." Company is very selective in that they look for full-service partnering opportunities in their target industries and in geographic areas where they have resources available.
Are standard proposal templates used?	Yes, although vendor seeks to customize each to add value when they have the opportunity.	Yes, to initiate an engagement. Then vendor prepares a "strawman" planning document for the actual project.	No. Vendors' limited experience and "body shop" format requires more customized proposals.	Vendor tries to standardize but reports that rapid changes in their offerings makes this very difficult.

Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse	21
What pricing approaches are used?	Time and materials and fixed price are used, depending on the services offered and the extent to which project unknowns are quantifiable. (Note: SAP's product portion averages \$1M.)	Pricing depends on the services to be provided: full-service is fixed and individual services tend to be time and materials.	Generally, time and materials for services. Products are fixed price. Cost-plus is an option infrequently used.	Prefers fixed price for full SAP implementations but does work on time and materials in areas of many unknowns (e.g., original development work).	
What are the relationships with hardware vendors?	Andersen has extensive relationships with all major hardware vendors, sharing technical information and, through their Technical Competence Centers, working jointly on hardware/software interface issues.	Vendor has relationships with IBM, Hewlett-Packard, Digital, and Sun for the supply of hardware to SAP projects. Sharing of technical information is most frequent activity.	Vendor has no strong links to any hardware vendors.	Vendor works with all types of equipment; HP, IBM, and DEC were specifically mentioned. Only vendor to offer "turnkey" solution.	

Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse
What is a typical SAP engagement?	Projects are very complex; it is not easy to install SAP. Andersen confirms that "typical" projects usually last 12-18 months and involve up to 12 people.	Typical project takes 1-1.5 years. Critical path functions for a "typical" implementation are: Scoping 4-6 weeks As-Is Model 4-8 weeks Reengineering 12-18 weeks Core Prototyping 20-28 weeks Pilot & Imp. 12-20 weeks  Typical Staffing: Resource Client External Proj Mgr. 1 1 Integrator 1 .5 Funct. Teams 14-20 3-4 Tech. Integ. 1 Support 3-5 1 Total 20-28 6-7	Engagements are usually "body shop;" consulting, bundled software, database, implementation, and financing. Client training for knowledge transfer is a key offering.	Most projects involve 200-300 end users; they do have one site with 1,000 users and several under way in the 3,000-5,000 range. Vendor notes that typical projects can have a run rate of \$20,000/day with a duration of 12-18 months.
Are standard process models used?	Electronic templates are available for key industries, including discrete manufacturing, chemicals, electronics, and consumer goods. They also have a full set of business processes documented and, for R/3, pre-configured data tables.	Vendor has wrapped SAP inside their life cycle methodology. They have industry templates for chemicals, process and discrete manufacturing, packaged goods, and others.	Generally no. Vendor is developing the experience to support standard models. Note, however, their product offering in distribution.	Vendor has developed a number of industry templates, pre-configured, functioning implementation, including common practices and terminology.

Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse
What development tools are used?	Andersen has an SAP implementation model, based on their packaged software methodology, that self-documents the project as it is being designed by the team. They use this tool to demonstrate their approach, share tips and ideas from other implementations, and capture the unique issues of the client.	They provide tools for scripting, prototyping, etc. 4FRONT is their SAP implementation methodology; it includes tools for project scoping and planning, business process redesign, prototyping and implementation. R/3 Analyzer tool is incorporated in the implementation methodology.	ICS offers Universal Portable Interface for all SAP platforms. UCP provides a consistent interface to EDI and non-EDI requirements. ICS FastTrack is an implementation system for project scoping and planning, assessment and configuration, core configuration, fine-tuning, testing and system delivery. Issue Management is a tool used to analyze and solve issues which are called out into a database. ARIS-Toolset (an SAP-supported, IDS-developed product) is a business modeling tool that employs industry-specific built-in business models. It is a part of FastTrack. ICS is a value-added reseller of IDS' ARIS in Mexico, plans to expand this relationship to Europe and the Far East, and is working with IDS on the development of future products.	Vendor has adapted their packaged software methodology to the SAP product. They also offer an R/3 Toolkit of application software to accelerate implementation of R/3 in client-server environments. Vendor also employs their Change Integration and Business Process Transformation methodologies as an umbrella approach. These latter two are usually a part of larger reengineering efforts.

Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse
Number of consultants who are experienced in SAP?	Approximately 800 experienced consultants (actual project work), many of these in the U.S. working on R/3 projects.	490: 300 in North America, 100 in Europe, 40 in Africa, and 50 in Asia/Pacific (includes Australia)	404 in the world, mostly in the U.S.	Over 500 worldwide with 386 in the U.S., up from 16 when they started in 1988.
How are they rated or classified?	Andersen ultimately classifies workers according to the billable rates they can command. The number of actual SAP projects completed is a key criterion, followed by the amount and type of training.	Most are rated by the amount of experience (industry and SAP) they have (most are European) and, secondarily, their ability to be a "good" overall consultant.	SAP background is key. Also ICS looks for employees who share their core beliefs for customer satisfaction and are dedicated to finding new ways to make SAP perform more efficiently.	Employees classified by seniority; SAP employees have 1-15 years of SAP experience.



Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse
To what extent is the experience derived from formal training vs OJT?	<p>All consultants have had formal training and most have or are getting on-the-job experience. Also, experiential knowledge is shared via a corporate-wide network using Lotus Notes (called Knowledge Exchange).</p> <p>Andersen plans to train another 1,100 consultants in the U.S. over the next 8 months.</p>	<p>Vendor offers a 6-8 week in-house training program, but mostly hires experienced people. Vendor finds it easy to transport experience from project to project.</p>	<p>ICS relies mostly on previous experience, but does offer training on ICS-specific methodologies and tools.</p>	<p>Vendor provides own six weeks training program (they did use SAP's school, but pulled out years ago). They plan to invest \$3M to train 200 SAP specialists and give another 200 an SAP overview. They also run IT KnowledgeNet using Lotus Notes. There are six SAP Design Centers around the U.S. that share information. Employees also have access to the corporate R&amp;D Center information in Menlo Park, CA. Finally, a group in Bethesda, MD looks at performance and technology issues a number of technologies.</p>

Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse
Do suppliers use "centers of excellence" or analogous units?	Andersen has moved away from the COE to their own Regional Competence Centers.	Yes. Vendor uses the COE as a centerpiece of their qualification. This is D&T's only major software vendor relationship. In 1994 they established the Consumer Packaged Goods COE as well as the High Tech COE and a Global COE.	No, but ICS is a certified SAP partner.	Vendor was part of a joint venture with SAP for the Center of Expertise in Philadelphia but is now out of that effort. Vendor prefers referencable accounts but all of them are either in development or are undersized for prospective customers. Vendor does have an R/3 Design Center in Santa Monica, CA for prototyping SAP software.
How are they utilized?	The regional centers are used as a venue for exchange among SAP, Andersen, and the client. For example, these three parties might do joint resource planning at the center or exchange information specific to the client. Each center is managed by an Andersen consultant responsible for the relationship with SAP for that region.	D&T's COE is a central hub for all SAP activities, including product/program management, implementation methodology, marketing/client services, practice coordination, recruiting and training, technology and alliance relationships, and engagement staffing.		R&D center participates in beta tests for SAP. They also converted SAP to Japanese. These relationships are made clear in sales literature and presentations.

Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse
What does SAP contribute?	See above.	SAP's Center of Expertise offers access to broad functional skills, industry-specific experience, and SAP-specific training in their implementation methodology and ImplementationWare (IMW) tool. SAP also offers an SAP Advisory Team to D&T's COE.	SAP uses Intel's ProShare videoconferencing to provide interactive, face-to-face support, especially to customers. Vendor can also use the Jumpstart program that allows customers to send project teams to SAP for training.	See above.
What is SAP's strategy and approach in working with service providers?	SAP very non-committal on vendor criteria or qualifications. SAP personnel would only state that named vendors were qualified and that non-SAP issues should prevail. SAP offers a Partner Alliance, complete with awards for customer satisfaction. This program has both contractual and marketing components.			

Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse	
What does firm see as special strengths?	<p>Worldwide presence</p> <p>The ability to field strong teams throughout the U.S.</p> <p>A repository of best practices (i.e., pre-configured SAP software) that is the result of a previous client's implementation plus added value from Andersen.</p> <p>The ability to get a rapid implementation through use of their pre-configured software templates.</p> <p>A strong education practice throughout the firm, some of which is focused on SAP.</p>	<p>One of four winners of Award of Excellence, a customer satisfaction survey sponsored by SAP.</p> <p>Claims to provide more senior-level personnel on SAP projects; vendor claims other vendors have a 1:6 ratio while they have a 1:3 ratio.</p> <p>Experience with implementing SAP, especially configuration and technical assistance through the COE.</p>	<p>OpenScan/1 is a software add-on to SAP software that integrates goods movement information with SAP using data collection and radio frequency technology.</p> <p>ICS feels their history with SAP (4 founders were consultants with SAP for some time) and their exclusive focus on SAP are both assets.</p> <p>they also tout their "fast and easy" implementations and quick knowledge transfer (limiting "long-term client dependency")</p>	<p>Understanding of and ability to implement underlying architectures.</p> <p>Also, vendor believes that they are able to field stronger teams.</p> <p>Worldwide presence.</p> <p>Vendor won the 1994 SAP Award of Excellence.</p> <p>The Design Centers provide rapid SAP implementations through industry-specific templates. These centers also offer benchmarking, R/2 and R/3 connectivity, DE, and technical platform characteristics and capabilities..</p> <p>Only Big Six to be a Certified SAP trainer.</p>	38
Who do they believe are their competitors?	<p>Andersen mentions the Big Six; They also feel companies such as ICS are in a different business.</p>	<p>D&amp;T mentioned Price Waterhouse.</p>	<p>Big Six</p>	<p>Andersen Consulting and ICS</p>	

Key Questions	Andersen Consulting	Deloitte Touche	International Consulting Solutions	Price Waterhouse
Plans to change approach or offerings?	Thrust is on developing more industry templates and increasing the number of consultants qualified at higher billable rates.	Near-term focus is on growing the business as it currently exists, especially in expanding the COE and enhancing D&T's ability to find and attract experienced SAP consultants.	No plans to move from software add-ons, expanding service offerings slowly, and enhancing relationships with key integrators.	Vendor may develop approaches to migrate R/2 users to R/3, a problem that could take SAP at least five years to solve. Also, more stringent project selection criteria to target full-service projects with add-on opportunities.

#### IV. Information from User Survey

##### A. Summary Information

A brief summary of information is shown since the exhibits that follow provide the information in more detail.

Assignments are long. R2 assignments involved an average decision time of 5.3 months and an implementation time of 14 months. R3 assignments had a decision time of 8.6 months and an implementation time of 17.2 months.

The four key vendors were reported to have the largest number of assignments among the 30 users interviewed. Andersen was used alone or as part of a team, 9 times. ICS and PW were each used 6 times as the sole vendor or on a team. D&T was mentioned 3 times as part of teams. In 2 other cases, SAP contracted with D&T to provide some aid.

Reengineering was done by support vendors in 43% of projects.

Not all users were satisfied with support vendors. In 4 of 23 support projects, users reported they were not positive about vendor work.

Assignments of support vendors involved varying numbers of vendor personnel. Some users added to the vendor personnel by hiring contract personnel to work with the support vendors. For R2 projects, an average of 2 senior and 6 junior personnel from support vendors were used. For R3 projects, an average of 2.9 senior and 7.2 junior personnel were used.

Users report that support is needed in most cases. Of 20 users of R3 software, 18 felt that all or most needed aid, and 2 weren't sure what percent needed it. Of 4 users that did not use a support vendor, all felt that most or over half of SAP users needed it.

Thirteen of the 20 R3 users who employed a support vendor reported that their vendor had a center of excellence. Several users pointed out that all the key vendors had centers of excellence, but that many users took it for granted as an essential part of a SAP support program.

All 20 R3 users who used a support vendor expected the vendor experience to include a high level of SAP knowledge.

**B. Exhibits of Information from Users**

A set of exhibits follow which summarizes the information obtained from users. The information was difficult to collect since many users had signed a commitment to provide no information about SAP software products to unauthorized parties.

## Industries Represented

### R2 Users

Industry	
Food Mfg.	1
Petroleum	1
Chemical	2
Discrete Mfg.	1
Utility	1

### R3 Users

Industry	
Food Mfr.	2
Petroleum	4
Chemical	2
Pharm.	3
Discrete	9
Wholesale	1
Education	1
Utility	1
Bus. Serv. (Real Estate)	1



## R2 Support

Number of Respond.	SAP Support Vendors	Evaluation of Support
1	P W and ICS	Positive
1	ICS	Positive
1	McKinsey (Used Profess. Services Vendors also)	Neutral
3	None Used (For one of these, SAP Subcontracted work to D & T)	

## Functions Implemented by R2 Users

Functions	Aid Obtained From
Sales, Distribution, General Ledger	PW, ICS
Purchasing, AR, Sales, Order Processing	McKinsey and Profess. Serv. Vendors
Everything but HR and Payroll	ICS
Finance, Material Mgmt., Plant Management	No Support Vendor (Profess. Service Vendors aided)
Order Process, Mainten., Payroll, Finance, Fixed Assets, HR	No Support Vendor (Profess. Service Vendors aided)
Purchasing, Materials Mgmt.	No Support Vendor (SAP used D & T as subcontractor)

## Support Provided For R2 Users

### Average Personnel Provided

Senior            2

Junior            6

Note: Users obtained contract personnel  
from Profess. Serv. vendors to use on project.  
SAP also assigned personnel.

## Analysis of R2 Project Time

Activity	Average Time Taken
Decision for SAP	5.3 Months
Time to Implement	14 Months plus (4 Respondents would only say more than 1 year)
Is Project Finished	All report it is

## Characteristics of Aid for R2 Support

Characteristic	User Report
Reengineering Assistance	In 2 of 3 Support assignments (One of these was a team of 2 vendors)
Use of Models	1 used business models
Centers of Excellence	In 2 of 3 support situations, centers of excellence existed.
Experience of Vendor	1-Reports high level experience. 2-Are not sure of vendor experience, but think it is more than other vendors.
Strengths of Vendors	1-Practical experience with SAP 1-Most experience with SAP 1-Not sure

## Necessity for Using A Support Vendor with R2

### User Group

### Attitude toward Vendor Aid

3 who used  
Vendor aid

2 Report all SAP users need it  
1 Reports most should use it

3 who did not  
use Support Vendor

1 Reports most need aid  
2 Reports an average of 50% need aid

## Rating of Support Vendors by R2 Users

Vendor	Average Rating *
--------	------------------

Andersen Consulting	3 (Rated by 3)
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Price Waterhouse	3.5 (Rated by 4)
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Deloitte & Touche	4 (Rated by 3)
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Coopers & Lybrand	3.5 (Rated by 2)
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ICS	4.3 (Rated by 4)
-----	------------------

IBM	4 (Rated by 2)
-----	----------------

SHL	3.5 (Rated by 2)
-----	------------------

McKinsey	4 (Rated by 1)
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\* Where 5=high and 1=low

## R3 Support

Number of Respondents	SAP Support Vendors	Evaluation of Support
6	Andersen Consulting	Positive
1	Price Waterhouse	Positive
1	ICS	Positive
1	McKinsey	Positive
1	Ernst & Young	Positive
1	KPMG	Negative
1	Big 6 (Won't name)	Positive
1	ICS and D & T	Positive
1	Andersen Consulting, D & T, Price Waterhouse	Neutral
1	Andersen Consulting, Deloitte & Touche	Positive
1	Price Waterhouse, IBM CGS, Sercon	Negative for first 3; Positive for Sercon
1	ICS, IBM, Price Waterhouse	Positive
1	Andersen Consulting Price Waterhouse	Positive
1	ICS, Siemens Nixdorf	Positive
1	DRT Systems	Positive
4	None Used	



## Analysis of R3 Support

Vendor	How often used
Anderson Consulting	6 alone, 3 as part of teams
Price Waterhouse	1 alone, 4 as part of teams
Deloitte & Touche	0 alone, 3 as part of teams (used by SAP in at least 2 situations)
ICS	1 alone, 3 as part of teams
Other	5 alone, 4 as part of teams

## Functions Implemented by R3 Users

Functions	Number of Respondents
Most or all	5
Combinations of Accounting, Financial, Sales Distribution, Production Planning, Inventory Control	7
Combinations of above plus Material Management	2
Production Planning, HR, Sales, Financial	1
Financial	3
Purchasing	1
Order Entry	1

## Personnel Support Provided for R3 Users

### Average Personnel Provided

Senior	2.9
--------	-----

Junior	7.2
--------	-----

Note: Users obtained contract personnel from Professional Services vendors to use on project SAP also assigned personnel.

## Analysis of R3 Project Time

Activity	Time Taken
Decision for SAP	Range from 3 to 30 months. Average of 8.6 months
Time to Implement	Range from 4 to 39 months. (Some are enterprise wide programs)
Is Project Finished	12 of 24 R3 users report "no". 2 of these are within one month of completion.

## Characteristics of Aid For R3 Support

Characteristic	Users Report
Reengineering Assistance	In 8 of 20 support situations, support vendor provided it. In 3 others, another vendor provided.
Use of Models	4 report vendors used functional models 3 report vendors used in industry models 2 report vendors used application models
Centers of Excellence	13 users report their vendor had one.
Experience of Vendor (For 20 who used a vendor)	5 report "High quality SAP knowledge" 5 "More than anyone else about SAP" 4 "Many SAP clients" 1 "Know SAP technology" 3 Refuse to answer 2 Don't know, but expected SAP knowledge
Strengths of Vendor (For 20 who used a vendor)	8 "Knowledge of R3" 4 "Past experience with SAP" 3 "Know our industry (and SAP)" 1 "Consulting strength" 1 "Size of Vendor and SAP knowledge" 1 "Relations with SAP" 2 Not sure

## Necessity for Using A Support Vendor with R3

User Group	Attitude toward Vendor Aid
20 who used Vendor Aid	9 Report all R3 users need aid 2 Report most users need it. 7 Report an average of 60% need it. 2 Can't estimate
4 who did not use Vendor Aid	1 Reports most users need it. 3 Report an average of 57% need it.

## Rating of Support Vendors By R3 Users

Vendor	Average Rating *
Andersen Consulting	3.6 (Rated by 16)
Price Waterhouse	3.1 (Rated by 11)
Deloitte & Touche	3.1 (Rated by 9)
ICS	3.6 (Rated by 11)
C & L	2.8 (Rated by 6)
SHL	2.5 (Rated by 2)
IBM	4.5 (Rated by 2)
McKinsey	4.0 (Rated by 1)

\* Where 5=High and 1 =Low

## Comments About Vendors

Vendor	Comment
Andersen Consulting	Large number of support personnel. Long experience with SAP. Has worked with SAP since early R2 installations. Cost of consulting is 3 to 5 times software costs. Know business of big oil companies. Well connected with SAP.
Price Waterhouse	Comprehensive program and diskette that describes it. Knows technology. Andersen and Price lead the field. They were taxed by the size of our job.
ICS	Ahead of others in knowledge of software. Dedicated to SAP business. Most experience with R3. Know how to run SAP projects.
Deloitte & Touche	Brought in by SAP, but doesn't know R3 system as well as ICS. Has experience with SAP business.
McKinsey	Consulting strength. Others know more about SAP.
IBM	Is trying to gain strength with SAP. Wants to get more support jobs for SAP.



## Vendor Techniques for Gaining Additional Business

Technique	Reported by
Perform reengineering for client	Andersen Consulting, Price Waterhouse, and ICS clients.
Promote enterprise wide projects.	Andersen Consulting, Price Waterhouse clients.
Client/Server training and support	Andersen Consulting, Price Waterhouse and D&T clients
Related projects	Andersen Consulting, Price Waterhouse and D&T clients



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**COMPUTER INTEGRATED MANUFACTURING (CIM)**  
**C. Jones, E.Keller, V. Mirchandani**

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# **SAP: Getting Ready for 3.0**

## **Management Summary**

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With the sweeping number of enhancements and increased market interest, the release of SAP R/3 3.0 is truly a watershed event in the software industry. SAP is attacking many fronts with the release of 3.0:

- Improving core functionality
- Expanding to new functional areas and vertical markets
- Initiating a new distributed architecture paradigm
- Beginning to address implementation issues.

SAP has invested heavily in the development of release 3.0 with an estimated 1,000 man-years in the release. In one sense, many of SAP's clients have also invested heavily in the promises of improved functionality and technology that are slated to be available in release 3.0. In general, SAP has addressed much of its long term vision with release 3.0. However, there are a number of critical areas where SAP has much work to do before meeting its commitments. User organizations should consider release 3.0 a significant step toward a comprehensive, complex yet enigmatic product.

With R/3, significant advancements have been made in core competencies, although much user attention has been on the numerous technological and functional Initiatives in release 3.0 targeted at reaching further and deeper into the enterprise. Users that planned to leverage SAP's traditional strengths with release 3.0 will find it a highly capable product. For example, SAP has improved the depth of its already-strong financial and order management functionality as well as enhanced some core areas of manufacturing. users requiring capabilities outside sap's domain expertise will find themselves waiting much longer than anticipated or forced to address their needs through other means. For instance, SAP's expansion initiatives are not expected to live up to the expectations of SAP's many process, batch and hybrid manufacturer customers outside of the headquarters environment.

With the release of 3.0, SAP begins to address the significant implementation issues facing users, both today and in the future. Through technological enhancements, SAP is allowing greater access to its information and setting standards that protect integration investment for the future. The release of 3.0 also begins to take on the complex task of configuration through systems-assisted tools. However, offsetting these positive steps is a product with 67 percent more configuration capability and different technological underpinnings. In the mean time, users implementing R/3



with the ability to learn, evolve, and adapt to changing business requirements.  
complex deployment process.

SAP continues to be extremely focused on expanding the breadth of influence of its technology, and it is creating the critical mass of technology and partnerships to become a major technological infrastructure provider, like IBM or Oracle. Users need to be aware that when they purchase SAP for functionality, they are also purchasing an increasingly large part of a technology infrastructure that will dominate their IS agenda for years to come.

The way in which users have implemented R/3 today has fundamentally been fully centralized from a server perspective. With the release of R/3 3.0, SAP is beginning to move to a distributed computing environment. That is really how R/3's functions and the technology are rolling out. Today, the functionality of R/3 represents a robust transaction backbone for back-office operations. With the release of 3.0, SAP is extending that functionality and technology beyond where R/2 was ever able to be effective. The release of 3.0 is an exciting and significant next step, as it allows SAP to explore new and unfamiliar parts of the enterprise.

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# FORRESTER

## The Forrester Report

### Packaged Application Strategies

Volume One, Number One

April 1996

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#### Focus

#### The Prudent Approach To R/3

SAP's R/3 business is booming. The suite promises control over operational mayhem while reducing costs – but only at the risk of implementation failure, missed opportunities, and internal atrophy. Smart companies will take a prudent approach to managing these risks – including an R/3 exit strategy.

#### Introduction

#### Why Does R/3 Matter?

#### R/3 Delivers Real Benefits -- And Real Risks

#### Addressing The Risks Of R/3

#### Maximizing The Chances Of Implementation Success

#### Minimizing The Impact Of Proprietary R/3 Technology

#### The Bottom Line: Keep The R/3 Exit Option Open

#### The Impact Of The Global 2,000's R/3 Adventure

#### Journal

#### SAP short subjects.

#### Lawson signals a new way to buy packaged apps.

#### Oracle dances with everyone to gain business.

#### Cognos makes a PowerPlay.





## Controlling Packaged Apps' Costs

### Figures

Figure 1: R/3's Benefits And Risks

Figure 2: Living With R/3

Figure 3: Maximizing Implementation Success

Figure 4: Reducing R/3's Entanglement

Figure 5: Forecasts Of R/3 Product Revenue

Figure 6: R/3 Exit Strategies

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### Focus

## The Prudent Approach To R/3

## INTRODUCTION

SAP's R/3 -- the world's best-selling suite of business applications -- is a mixed bag (see Figure 1: R/3's Benefits And Risks). On one hand, it boasts impressive capabilities. At the same time, R/3 has significant restrictions that can constrain your company's flexibility and ability to compete effectively in a changing market. Your success -- or failure -- with R/3 will depend on how well you manage these risks.

This report looks at life with R/3 and concludes that prudent companies will:

1. Take particular actions to maximize their chances of a successful R/3 implementation.
2. Limit their dependence on R/3 and SAP's ABAP4 tools.
3. Create a realistic R/3 exit strategy -- and expect to use it.

[Return to Table of Contents](#)

[Request more information](#)

## WHY DOES R/3 MATTER?

R/3 stands out in the client/server packaged applications arena due to the compelling combination of four



factors:

- ❑ **Tight integration.** R/3's applications are tied together into a disciplined whole. This means that all of R/3's modules -- purchasing, payables, general ledger, etc. -- work together instead of functioning as separate applications. This eliminates time-consuming and error-prone activities like matching invoices to purchase orders, vendor ID translation, and ledger posting.
- ❑ **Single view of the business.** All applications in a single instance of R/3 share the same database. This eliminates the possibility of duplicate or redundant data -- minimizing the chance that two people will get different views of the same business activity. This allows R/3 to support consistent reporting and analysis across operational activities.
- ❑ **Process orientation.** R/3 is based on a process model of business -- focusing on activities like distribution -- and not on traditional stovepipes like order processing, inventory management, and shipping. This approach forces attention on the end result -- not on incidental, incremental steps. This can drive a streamlining of business processes.
- ❑ **Rich functionality.** R/3 embodies proven best practices based on SAP's more than 20 years of experience supporting large companies. Initial releases of R/3 were derived from SAP's R/2 legacy mainframe products. There is little that R/3 cannot do -- one way or another.

[Return to Table of Contents](#)   [Request more information](#)

## R/3 DELIVERS REAL BENEFITS -- AND REAL RISKS

To many business executives, R/3 appears to be the perfect solution to never-ending challenges caused by:

1. Creaky mainframe systems that have outlived their usefulness.
2. A history of decentralized management that has left a trail of disconnected, uncoordinated applications.
3. Mergers and acquisitions that add multiple incompatible systems to application portfolios overnight.

Corporations implementing R/3 hope to fix these problems by:

- ❑ **Imposing control on operational disorder.** This includes handling business activities consistently across the enterprise, centralizing command and control, and forcing a functional organization structure. Centrally managed, top-down organizations thrive on R/3's forced uniformity of business processes and data.
- ❑ **Improving efficiency and lowering the cost of doing business.** This means upgrading processes to follow best industry practices and squeezing out redundancies and needless steps. R/3's process orientation and rich business models offer the possibility of maximizing operational efficiency.

But R/3 also has drawbacks. With its strengths come reduced flexibility due to R/3's all-encompassing nature. Companies implementing R/3 face three serious risks:



- ❑ **Implementation failure.** Most R/3 implementations stretch the limits of both company and systems integrator project management skills. They are huge -- in time to complete, number of organizations included, and number of people involved. Failing in an effort of this magnitude will distract the entire company for years.
- ❑ **Missed new business opportunities.** Corporate systems must thrive on change as IT reaches out to build new customer connections (see the August 1, 1995 *Software Strategy Report*, "New Customers For IT") and as eCommerce moves far beyond traditional EDI. R/3's tight integration and complexity can make it difficult for processes to change rapidly.
- ❑ **Loss of internal strength and agility.** R/3's everything-including-the-kitchen- sink nature can cause atrophy of essential skills and capabilities. R/3 defines how things get done, takes massive resources to implement and run, and can lock companies into its proprietary ABAP4 technology.

Wise companies will tackle these risks from the moment they decide to go forward with R/3.

[Return to Table of Contents](#)   [Request more information](#)

## ADDRESSING THE RISKS OF R/3

Living with R/3 will be a risky hike across rolling logs in a raging river ([see Figure 2: Living With R/3](#)). To keep R/3's risks in check companies should take two steps:

- ❑ **Break up the overall project.** Large companies should contain the R/3 implementation risk by focusing on the incremental benefits of each phase of the effort -- rather than waiting for a massive, hazy payoff in the distant future.
- ❑ **Minimize the use of proprietary SAP technology outside of R/3 itself.** Allowing R/3 to become deeply intertwined with non-R/3 applications is a dangerous gamble. Smart companies will limit their dependence on R/3 -- and give themselves the flexibility to easily source technology from other vendors.

[Return to Table of Contents](#)   [Request more information](#)

## MAXIMIZING THE CHANCES OF IMPLEMENTATION SUCCESS

Due to their size and complexity, R/3 implementations run real risks of failure. Companies can reduce their exposure to a failed implementation by slam-dunking R/3. This means constraining the size and breadth of the effort with three tactics ([see Figure 3: Maximizing Implementation Success](#)):

- ❑ **Subdivide the project.** Break the implementation into 12-month chunks -- the size and scope of previous successful projects. Insist that each phase add real value by itself -- recognize that your company may decide not to go further. This approach yields: 1) incremental benefits without excessive long-term lock-in; 2) reduced time between requirements definition and solution delivery; and 3) preservation of the option to change your company's direction and focus several times during the overall R/3 implementation.



- **Leverage best demonstrated practices.** R/3's complexity is daunting -- over 7,000 tables control more than 3,000 processes. Twiddling with all these knobs will suck you down never-ending re-engineering rat holes. Forrester's advice: Don't reinvent the wheel. Instead, take an "implement and tune" approach using existing best practices from SAP or your favorite systems integrator. This strategy should reduce elapsed implementation time by as much as 50%. Once you are in production, you can make changes that are really valuable.
- **Drive projects by cutover dates.** Don't get hung up on the costs -- time is your biggest enemy. With the delivery date as the critical variable, the project scope will adjust itself -- and nice-to-have but ultimately unimportant modifications will fall off the to-do list.

[Return to Table of Contents](#)    [Request more information](#)

## MINIMIZING THE IMPACT OF PROPRIETARY R/3 TECHNOLOGY

Business success requires using more than just R/3 -- but R/3 does not easily coexist with non-R/3 technology. To avoid being drawn into a dicey R/3-as-the-center-of-the-universe situation, companies need to take four steps: 1) hide R/3 behind a technology curtain; 2) use third-party applications -- not R/3 -- to reach outside the company; 3) do decision support outside of R/3; and 4) avoid dangerous dependence on SAP ([see Figure 4: Reducing R/3's Entanglement](#)).

### Hide R/3 Behind A Technology Curtain

The goal is to isolate R/3. This will make it possible to swap applications -- including both pieces of R/3 and other vendors' products -- in and out based on business needs. To accomplish this companies need to restrict the use of SAP's proprietary tool ABAP4 and R/3 data formats in two ways:

- **Wrapper R/3 messages and transactions with standard interfaces.** R/3 has its own idiosyncratic technology. To avoid difficult, entangling alliances, all communication with R/3 should use industry-standard formats and interfaces. Only R/3 applications should access the ABAP4 function calls or send messages in proprietary ABAP4 formats.

Today, the solution is using messaging technologies like IBM's MQ Series or object request brokers like Digital's ObjectBroker. In the future, it means using emerging communication technology that Forrester calls "application couriers" (see the January, 1996 *Software Strategy Report*, "Intranet Middleware").

- **Contain R/3 data formats.** Don't let applications outside of R/3 use R/3's data formats. Why? Because R/3's complex data model won't map well to your existing systems. If other transaction applications need R/3 data, use replication technology from your preferred database vendor to move and translate the data. This way, only the data replication technology knows about R/3's data -- not the non-R/3 application.

Technology specifically designed to isolate R/3 is coming to market in the near term. Independent software vendors will deliver purpose-built interfaces that hide R/3 -- like Business@Web's OPenscape. And R/3 consultancies are developing their own wrapper technologies -- like Deloitte/ICS' Universal Portable Interface.





## Use Third-Party Applications -- Not R/3 -- To Reach Outside The Company

SAP and a horde of associated companies have mustered unparalleled resources to drive R/3 forward. But Forrester believes that the R/3 cartel will not be competitive in the delivery of systems that touch customers, suppliers, and business partners.

This has three implications:

- ❑ **Don't use R/3 for new customer connection applications.** These outward-facing applications are a source of competitive advantage -- winning new customers and retaining existing ones will depend on them. And this doesn't mean just order entry -- all applications must become customer-ready. The growing reality is that your customers and trading partners will become regular users of all your corporate systems -- including traditional back-office favorites like bill-of-materials, scheduling, or accounts receivable.

But R/3's 1980s technology will not let you keep pace with the Internet-led explosion of new connections with customers. To address this need, buy outward-facing applications from Internet-focused vendors like Vantive, Aurum, and Scopus.

- ❑ **Separate responsibility for new customer connection applications.** Use a group other than the R/3 bunch to manage these new apps. This will ensure that R/3 is one piece of your application portfolio, not the portfolio itself. This approach uses organizational separation to prevent R/3 from penetrating too deeply into your company.
- ❑ **Treat R/3 as a productive legacy application.** This means stabilizing the system in an upgrade and maintenance mode. Over time, expect to de-install R/3 modules and replace them with non-R/3 applications. SAP will make this easier over the next three to four years as it componentizes the system.

Curiously enough, SAP may well be one of the vendors you buy new customer connection applications from -- but they won't be built with ABAP4. The Walldorf behemoth is busily embracing new technologies outside of ABAP4 -- witness its recently announced intention to build an eCommerce application using Microsoft's Merchandising Server.

## Do Decision Support Outside Of R/3

R/3's proprietary reporting and query solutions cannot keep up with products from companies focused on this opportunity (see the January 1, 1995 *Software Strategy Report*, "Banquet For The Data Hungry"). Smart companies will avoid a myopic focus on R/3 decision support offerings -- using a single best-of-breed query and reporting solution will ease the burden on both IT and users. Three efforts are required:

- ❑ **Use SAP's tools to extract data from R/3.** R/3's Open Data Warehouse tool can recognize that ABAP4-managed data has changed and move it into an intermediate staging database. Then commercial database replication tools -- from companies like Oracle and Informix -- can move the staged data into datamarts for decision support (see the October, 1994 *Software Strategy Report*, "Weaving The Dataweb").



- **Deploy datamarts outside of R/3.** These are staged databases, containing data from R/3 and other applications, targeted to the needs of a specific group of users -- like finance or product management. Real-time access to R/3's large, centralized database should be limited to when the information must be absolutely current -- like checking inventory or work-in-process product configuration for customer commitments.
- **Use inexpensive desktop tools for query and reporting.** Give users leading third-party data reporting and analysis tools -- like Business Objects and Cognos' Impromptu and PowerPlay -- so they can troll through the data to answer their own questions. At a cost of \$100 to \$300 per seat, you can afford to distribute these tools widely.

## **Avoid Dangerous Dependence On SAP**

R/3 could permeate your entire business -- if you allow it. The tendency is to focus every corporate sine on making R/3 a success. The risk is that R/3 becomes the default solution for all of your problems. The result of this is a loss of basic internal strengths -- an atrophy of any IT skills and capabilities not related to R/3. To avoid this:

- **Don't bulk up on ABAP4 skills.** Plan on using your systems integrators' R/3 technology skills for the life of R/3 in your company -- don't train all of your IT staff on ABAP4. If you do, it will make it difficult or impossible to separate from R/3 in the future. Besides, R/3 is so complex that you will require the integrators anyway -- even post-implementation. If you compete in rapidly changing markets, expect a significant ongoing bill from your systems integrator partner as it implements change after change.
- **Require rigorous justification for all new ABAP4 projects.** Don't let developers roll out new R/3 extensions willy-nilly. The use of systems integrators for ongoing R/3 work will also force you to go through sobering cost analysis for each project.
- **Review R/3's fit annually.** Ongoing review of R/3's value should be an annual activity, even during implementation. Expect to allocate at least a person-year of time for this project. Drive this project from within the organization that owns the new customer connection applications -- not from the R/3 group. This will ensure that R/3 is reviewed from a critical customer-oriented perspective.

[Return to Table of Contents](#)   [Request more information](#)

## **THE BOTTOM LINE: KEEP THE R/3 EXIT OPTION OPEN**

Nothing is permanent -- not even R/3. To be prepared, all R/3 users should have an up-to-date R/3 exit strategy ready to pull off the shelf. While this may seem like a radical step, it is only prudent considering the risks of R/3 and the critical role it plays.

Two major events will shape users' R/3 exit strategies through the end of the decade:

- **R/3 sales will peak in 1997.** R/3 sales will stall next year for three reasons (*see Figure 5: Forecasts Of R/3 Product Revenue*): 1) The early adopters have all jumped onboard; 2) the bloom is off the R/3 rose as more and more companies wrestle with the reality of life with R/3; and 3)



SAP's effort to broaden the market by trying to take R/3 down- market will fail. As the R/3 hype wanes, so will users' enthusiasm for a lifelong commitment to the product.

- **SAP will roll out "R/10" in 1999.** Forrester believes SAP is working on a new product -- what we have dubbed "R/10." This new suite will be built from scratch using a distributed, object-based design. The result: a completely new set of products addressing most of R/3's risks. R/10 will replace R/3 in much the same way that R/3 replaced R/2. Starting in 1997, the first components will be pitched as add-ons to R/3 -- but by 1999, the full-blown R/10 will become SAP's lead product. As soon as the market understands the R/10 direction, R/3 will be branded an unattractive, previous-generation product.

Three factors will drive a company's R/3 exit timetable: 1) organization and management culture; 2) market dynamics; and 3) expectations of R/3's benefits. Based on your company's situation, your time horizon for exiting R/3 will fall into one of the following categories (*see Figure 6: R/3 Exit Strategies*):

- **Seven to 10 years.** This leisurely time frame is for top-down, centrally managed companies that operate in stable markets. Their success does not depend on making rapid changes to their business processes, and they are not likely to have an opportunity to grab massive competitive advantage by quickly outmaneuvering the competition. Their R/3 exit will be a gentle migration over a number of years. These companies have the luxury of choosing when to do the migration -- no external factors will force the timetable.
- **Four to six years.** Bottom-up, distributed organizations competing in rapidly changing markets should constrain the length of time they depend on R/3. But companies with deep organizational problems that compete in these throat markets must stay with R/3 as long as it takes to reestablish stability in their basic business processes -- R/3's core strength.
- **Two to three years.** Healthy, entrepreneurial companies that understand the immense value of building new customer connections will do the unthinkable: jump off R/3 a very short time after going through the pain of implementation. These companies will use R/3 for a surgical strike to obtain a quick fix -- and then move aggressively away. Only companies with visionary CIOs and general managers will be able to pull this off.

The need to isolate R/3, and plan and execute R/3 exit strategies will create a booming business for aggressive consultants and integrators for at least the next 10 years.

[Return to Table of Contents](#)   [Request more information](#)

## THE IMPACT OF THE GLOBAL 2,000'S R/3 ADVENTURE

In the post-game analysis, most companies will find their R/3 experience was valuable in helping them understand the three key dynamics shaping IT's future opportunity to add value:

- **The real action is outside the company.** Even successful R/3 implementers will ask themselves, "Is this all there is?" when they are done. R/3 may allow them to build perfect, integrated internal processes, but these contained activities are not the real source of competitive advantage, customer loyalty, market position, or company value. The only way to influence these essential characteristics of enduring market leaders is to stay externally focused.



- **Large-scale re-engineering is not worth it.** R/3 has fueled a surge in enterprise-wide re-engineering -- with the promise of faster, more trouble-free operations. But R/3's implementation costs and the other risks of R/3 will increasingly be a cold shower, freezing out today's massive projects. By the end of this decade, big one-time implementation projects will be the exception, not the rule.
- **Stability is no substitute for flexibility.** Companies comfortably thriving with R/3 in today's stable markets will wake up one morning to find that their industry has shifted overnight -- and that they do not have the capability to respond.

[Return to Table of Contents](#)

[Request more information](#)

## Journal

**Sun salutes SAP.** We recently met with Mark Tolliver, Sun Microsystems VP of market development for the new UltraSPARC-based servers rolling out this spring. Tolliver told us that through 1994 Sun servers accounted for less than 4% of SAP R/3 installations, but that over the last year Sun's share of R/3 shipments has risen to 15%. That's a healthy rise against HP's previously unchallenged dominance of the SAP server space. On other fronts, Tolliver said that Sun is getting a lot of calls from ISVs like D&B Software that are interested in building their next major releases with Java. ISVs see big value in Java's inherent security and distributed object architecture -- two things SAP could really benefit from in building a break-the-mold R/10 product.

**UNIX and Oracle are no longer R/3's sole benefactors.** Forever it seems R/3 buyers have heavily favored Oracle and its UNIX buddies -- especially HP. But this seems to be changing. According to Software AG, NT servers accounted for 12% of overall R/3 sales in 1995 -- but NT was responsible for 30% of total R/3 sales in the last six months of the year. From a database perspective, Software AG and Informix have both joined Oracle on the SAP gravy train -- each with 9% of SAP's 1995 shipments versus Oracle's whopping 81%.

**SAP staffs its leading Web partner.** Business@Web last month announced it has a new Chairman and CEO -- Klaus Besier. The name should sound familiar to U.S. companies: Until mid-February, Besier was president and CEO of SAP America, the fastest growing piece of the worldwide R/3 business. So why would he leave a fast-paced, booming business for a little start-up? Forrester believes that Besier sees the writing on the wall and expects Internet-oriented electronic commerce to rapidly outpace R/3 as the world's most exciting software opportunity.





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**R/3 means boom time for data drill vendors.** Every vendor of query and reporting tools we talk with is courting SAP to get the inside track as the favored third-party supplier of data drills for R/3. Two players have R/3 products ready -- Information Builders' (IBI) EDA/SQL and Cognos' PowerPlay. IBI tells us it is making one to two EDA/SQL installations a week in U.S. R/3 sites alone. From the noise we hear, there will be a lot more players and a lot more sites before this is all over.

.....

**Lawson signals a new way to buy packaged apps.** Companies today buy packaged applications defined by traditional product boundaries -- like general ledger, order processing, or accounts payable. Few buyers, however, actually organize and operate according to these old stovepipe product definitions. The dream alternative is for each organization to specify its process -- and buy a collection of components that combine to automate the process. This is exactly the space Lawson is targeting.

This summer -- with release 7.0 -- Lawson customers will be able to purchase a single fulfillment process instead of the three stovepipes: order processing, inventory management, and shipping. What makes this possible are two important ingredients: a component design and license management technology to handle flexible packaging. Forrester believes this is the future model for the packaged applications market. By the turn of the millennium, stovepipe applications will be a thing of the past.

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**Oracle dances with everyone to gain business.** In a recent conversation with Ray Lane, Oracle's president of worldwide operations, we discovered a new wrinkle in this aggressive behemoth's business style. Lane talked about Oracle's "integrated portfolio strategy" -- which mixes Oracle's own products with those from partners like Manugistics and Datalogics. But he also alluded to deals where the Oracle sales force would work with competitors if it meant Oracle could keep part of the deal. It sounded a bit far-fetched but then InPower -- Integral's client/server spinoff -- came by for a visit. It volunteered the same tale, saying that Oracle sales guys have brought InPower in on a couple of deals, enabling Oracle to sell its financial and manufacturing applications while sacrificing HR to InPower.

Oracle might, on occasion, bring in the competition -- but watch out, "partners" -- with Larry Ellison's aggressive history, any friendship with Oracle is likely to be fleeting.

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**Cognos makes a PowerPlay.** Cognos' PowerPlay product seems to be on a roll as it signs up yet another partner among the packaged applications vendors. PeopleSoft just announced a seven-figure deal for PowerPlay -- which beat out Business Objects for the business. The HR-turning-ERP vendor will create a



PowerPlay catalog that maps its application data to Cognos' tool. It will then seed all existing sites with a few free copies, selling more based on users' requirements. PeopleSoft joins other packaged applications vendors -- DBS and Ross -- that already market PowerPlay.

[Return to Table of Contents](#)

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#### Next Month

#### Controlling Packaged Apps' Costs

Large corporations used to spread packaged application costs over seven to 10 years. But fast-paced markets and rapid technology change have shortened application life to five years or less. This report will examine package strategies -- ways to contain the costs of implementing, operating, and replacing them.

[Return to Table of Contents](#)

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—End of Report—



# *The Decision-Maker's Guide to Professional Services Support for SAP America Implementations*

*Susan Irving  
Aberdeen Group, Inc.*

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**The Decision-Maker's Guide to Professional Services Support for SAP America Implementations** is written for enterprise executives who must make decisions about how their organizations will implement R/3. Suppliers of professional services may also find it useful for market dynamics, competitive offerings and potential partnerships.

As a potential buyer of SAP professional services support, this 119-page Guide provides information to assist you in making the best possible decisions around your R/3 implementation. Key issues are raised, analysis provided and conclusions are drawn around the following topics, including:

- the range of services offered and their value to end-users;
- market dynamics — the players, SAP's programs and realistic project costing;
- guidelines to define your unique implementation requirements;
- ways to distinguish among professional service providers;
- end-user success factors for the implementation.

The second section of this Guide describes, reviews and analyzes each of SAP America's Global Logo and Logo partners in a Profile. Included in each Profile are the names and numbers of key SAP contacts at each professional services organization.

SAP practices are profiled for the following SAP America partners:

- Andersen Consulting;
- CAP Gemini;
- CSC Consulting;
- Coopers & Lybrand;
- DDS, Inc.;
- Deloitte & Touche Consulting Group/ICS;
- EDS (A. T. Kearney);
- Ernst & Young;
- Hewlett-Packard;
- IBM;
- KPMG SETAC;
- Origin Technology in Business;
- Price Waterhouse;
- Siemens Nixdorf.

## **The Professional Services Challenge for R/3 Implementations**

Early reengineering efforts treated technology as a discrete and secondary step to an organizational analysis rather than a *critical* component of process steps. In time, frustrated companies were forced to throw out and rework much of their reengineering solutions as technology opportunities *and* limitations came to be understood. In fact, some SAP pioneers found, after redesigning their internal processes to





what they thought at the time were best practices, that needed critical processes were already embedded in R/3. And the R/3 best practices were most frequently superior from an industry- and enterprise-wide perspective.

*Today* most companies pick an enterprise solution like SAP as their reengineering enabler at the same time that they start to propose process changes to the business. They have learned from their own earlier efforts — or from war stories in their industry — that dramatic business improvements are best accomplished with the strategic use of technology.

In parallel, professional services providers now offer an integration of business process reengineering and technology capabilities for clients. Current R/3 customers tell Aberdeen that it is this inter-related knowledge of strategy and technology — of business process reengineering, continuous process improvement and R/3 module capabilities — and of change management that make consultants truly valuable, and almost always essential, to an R/3 implementation.

Aberdeen's research with R/3 decision-makers revealed that key to a successful R/3 implementation is choosing the *right* consulting organization — one firm, or sometimes several, that best meets an enterprise's unique R/3 implementation requirements and cultural style. Once the right professional services support is selected, the enterprise *and* consulting organization(s) must work together to achieve measurable business results and ensure a disciplined process of knowledge transfer to the end-user enterprise.

The professional services challenge — to ensure users and professional services suppliers work together to successfully implement R/3 and accrue the business benefits of process-driven enterprises — requires common ground. This book offers this common ground to enterprise decision-makers and consulting partners.

**The Decision-Maker's Guide to Professional Services Support for SAP America Implementations** is the first in a series of reports that will address emerging trends and market dynamics in the ever-changing area of professional services for information technologies. By focusing on the economics of the business from the end-users perspective, these reports will assist executives in analyzing the benefits of using professional services to achieve their enterprise objectives.

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# Technology Abstracts



Computer Systems, Software and Communications Consulting and Research

Below is an alphabetical listing of individual Abstracts. They are divided into 5 sections: *Viewpoints, Executive White Papers, Profiles, Announcement Profiles, and Impacts*. Click on the abstracts you want to read or [click here](#) to view or print the last few months of Abstracts.

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## Viewpoints

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[Market Viewpoint -- Volume 8/Number 13 -- October 6, 1995](#)

[Computer Associates: Foray Into Network Management](#)

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[Market Viewpoint -- Volume 8 / Number 10 -- September 27, 1995](#)

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[Market Viewpoint -- Volume 8 / Number 8 -- July 7, 1995](#)

[Data Warehouse Query Tools: Evolving to Relational OLAP](#)

[Product Viewpoint -- Volume 8 / Number 7 -- June 21, 1995](#)

[IBM's New AS/400 Advanced Series: Achieving Sophistication Through Simplicity](#)

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## Executive Viewpoints

[Commercial Messaging: The Keystone Of Strategic Long-Term Distributed Computing -- October, 1995](#)





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PeopleSoft, Inc. -- June 1995

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RDC Communications, Ltd. -- June 1995

Quintus Corporation -- July 1995

Siebel Systems, Inc -- June 1995

Software Artistrv, Inc. -- June 1995

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Svbase, Inc. -- SQL Server 11 Technology -- July 1995

Svmantec Corporation -- Enterprise Developer -- August 1995

Svnon Corporation -- September 1995

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Unikix Technologies-- October 1995

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Digital Equipment Corporation -- TeMip -- June 7, 1995

Wang Laboratories, Inc. -- Imaging and Workflow Applications -- September 1995



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Dynatech Communications, Inc. -- DynaStar 500 -- September 1995

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Stratus Computers, Inc. -- October, 1995

Taligent, Inc. -- CommonPoint -- August 1995

Wang Laboratories -- VS OFFICE Implementations -- July 31, 1995

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# Vendor Profile

A Publication from INPUT's Business Integration Programme – Europe

1996

## SAP Launch Internet-Enabled R/3

Following another stellar performance in 1995, SAP have recently made the next step in the development of R/3, their Enterprise-wide business applications software suite.

Although some of the heat has disappeared from their share price in recent months, SAP appear to have barely stopped to register the "SAP backlash" of the second half of 1995, and look poised to grasp the potential of the Internet very firmly.

SAP have announced that they are working with Microsoft, who they believe are well placed to integrate LAN-based client/server (C/S) technologies and the Internet, by layering R/3 applications software on top of Microsoft's C/S and Internet infrastructure.

SAP's tremendous success in capturing the Enterprise wide Business Software Applications market positions them well to extend their presence as client/server environments "mutate" into Intranet domains within the Internet.

This profile discusses:

- SAP's recent financial performance
- Details of SAP's Internet Initiative.

### 1995 Full Year Turnover Grows 47%

Exhibit 1 presents SAP's world-wide revenues for fiscal 1995. Until the middle of May these results are provisional, but still demonstrate that SAP has had another excellent year. 1995 revenues were up 47% to \$1.9bn.

Exhibit 1

#### SAP's 1995 Worldwide Results (Provisional) \$M

	1995	% change on 1994
Revenues (millions)	1,887	+47
Income before taxes (millions)	471	+43
Net profit (millions)	284	+44
Earnings per share	2.80	+44
Headcount (average for year)	6,443	+40

Source: INPUT

This project allows a customer to see and interrogate WWW format product brochures and then place formal, secure orders which are logged directly into the fulfillment system.

Prisma see competitive advantage in the use of this new development; Internet enabled R/3 being an extremely attractive way of gaining "customer lock-in".

SAP are working alongside the Munich based company iXOS, who run the Microsoft Competency Centre within SAP, and have experience in optical archiving and Unix-based technologies.

One of the questions that arises from these developments regards the very nature of competitive advantage which technology has traditionally promised to provide.

Arguably, competitive advantage appears to be diminishing due to the increasing speed of technology "churn", and the increasing speed with which organisations are able to respond to new technological developments.

Four months ago, Microsoft to the gleeful exclamation of many, appeared hopelessly adrift in their misreading of the characteristics, nature and impact of the Internet. Yet, within the course of these short few months a number of strategic deals appear to have placed them firmly back in centre court.

Although the Internet is now seen as a paradigm shift, a fundamental dislocation in

the development waves of IT, the current extremely short cycles of initiative and response by major vendors in the context of a "year zero" environment ensure that today's seeming competitive advantage fades quickly in tomorrow's cruel sunlight.

SAP's Internet initiative must be seen as both an offensive and defensive strategy; clearly SAP are asking the question what are the potential revenues this initiative will generate. But in some senses the more important question they have addressed is what will be the damage of not embracing the Net?

The damage they face if they do not undertake to embrace the rise of the Internet by placing R/3 on the Internet platform is that R/3 would become an isolated proprietorial kingdom surrounded by the Net, and in which new Net based applications and development tools relentlessly eat away at the functionality and coverage of R/3.

Presently Internet enabled R/3 is not a revenue stream, nor is being "sold" and there are, other than Prisma, no companies actually using the technology "in anger".

However, SAP see revenues coming on stream in early 1997, stating that this is a "first footprint" and an area of heavy investment and in which they are deploying core resources. Internet enabled R/3 is a "high priority" issue and more announcements will be made at SAP's developer conference at Orlando in May.

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This Company Profile is issued as part of INPUT's European Business Integration programme. If you have any questions or comments on this profile call Ben Pring at INPUT, Cornwall House, 55-77 High Street, Slough, SL1 1DZ. Tel: 44(0) 1 753 530444.



# SAP Changes Course

Pressures over cost, implementation time and maintainability are forcing SAP to radically rethink its model for R/3. Can the company maintain its leading position while it transitions to a component-based software model?

JOSHUA M. GREENBAUM

At first glance, it's hard to imagine how much is about to change for SAP AG and its customers. The company's R/3 integrated application suite is still the market-leading enterprise resource planning (ERP) product and its customers still comprise a "Who's Who" of companies in major markets such as manufacturing, chemicals and pharmaceuticals. The basic implementation model — a combination of business reengineering and client/server infrastructure — still holds for most customers, and the systems integrators who install and customize the product are still growing their revenues considerably. Even the underlying technology — R/3, the ABAP/4 development environment and relational databases that support it — is still largely the same highly integrated product that helped SAP take the U.S. market by storm beginning in 1992.

But the IS world better hang on to its collective hat. SAP, with R/3, is in the process of a major reengineering of its own, and the impact will be felt across the board — from architecture to partnerships to implementation strategy to customer base. It's a change that will shape the company and its market for years to come, and it's going to happen soon. Starting later this year with the advent of new Internet technology, and continuing next year with an opening up of R/3 and an eventual "componentization" of the entire SAP technology offering, the world of SAP will be vastly different from what the IS community sees today.

These changes to the now venerable R/3 juggernaut speak volumes not only about where SAP is looking to take the company and its product line, but also about where the user community is moving with R/3 and associated technologies. The changes include: a broad technology shift, a new architecture for how R/3 works in IS organizations, a growing partnership with Microsoft, a shift in focus toward faster implementations and smaller customers, and a change in how key implementation partners deploy R/3.

These changes amount to a sea change for SAP in how it develops and evolves R/3, and how it will approach the market now that the early adoption phase for the software is over. In many ways, the changes are motivated by a powerful external force — the customers — says Hasso Plattner, SAP AG's vice chairman and co-founder, and chairman of SAP America Inc.

"They want to get rid of the maintenance burden, they want to have the cheapest software, and they want to have the same growth in functionality," says Plattner. "The biggest [imperative] for SAP is to stay with the customers in the future design of the system."

Keeping pace with these customers — who are pushing SAP hard — is no easy feat. While most of SAP's 5,000 users are still in the process of implementing R/3, the growing body of experience on the part of so many customers has led to some important realizations by SAP executives: Major changes need to be made to accommodate key IS accounts who want SAP to cut the



## COVER STORY

cost of installing R/3 while enhancing its ability to integrate with other systems.

The current lack of openness in R/3 has been a major issue for most user organizations. SAP's technological vision has always been inward-looking, with a strong imperative for a "one-size-fits-all" philosophy. This is despite the fact that the experience of most IS managers is that R/3 has to be linked to some other system, be it a legacy environment or a product, to get functionality simply not available in R/3.

For example, at Chevron Corp., San Ramon, Calif., SAP's oldest major U.S. customer, building interfaces to legacy systems and linking up non-SAP applications have always been part of the plan. "SAP doesn't offer everything," says Jim Zell, Chevron's top R/3 archi-

tect. "They don't have oil and gas revenue accounting. We're using a Price Waterhouse package for that."

But while building interfaces may be a solution, it's hardly perfect. "When you do that you lose integration," says Zell.

The difficulties inherent in implementing a largely monolithic R/3 have been another key problem. Many users have been looking to add specific new functionality without having to upgrade the entire R/3 package. Other, multinational users have been grappling with the problem of having to manage implementations that span the globe from a single database model.

Peter Burrows, chief technology officer at Reebok International, Stoughton, Mass., a new R/3 customer, is grappling with a number of implementation issues that revolve around the level of R/3 integration. "One of the big questions is 'Do we go with a central database or a Pan-European database?'" says Burrows. "We don't know if we are going to split the databases or not."

Overall implementation times and the burden to user organizations of the traditional time-and-materials contract for an R/3 implementation have also come under attack. This has been perhaps the largest of the issues that have played negatively in press and analyst reports over the last two years. While some critics have overstated the cost of R/3 by citing overall implementation costs that include non-R/3 business reengineering, complete technology overhauls and the R/3 installation — at Reebok that total tops \$46 million over five years — R/3 is nevertheless complex to design and install. Cost overruns have plagued many R/3 projects, particularly those on a time-and-materials contract.

At Nova Chemicals in Calgary, Alberta, the fear of cost overruns was very much on the mind of Craig Leech, the SAP project manager for the \$5 billion chemicals subsidiary of Canada-based Nova Group. "We didn't want to get caught with a never-ending process," says Leech. "We didn't believe that a successful implementation could be done with a turnkey process, but we didn't believe that using [a systems integrator] as a body shop was the best way to go."

Meanwhile, users are still pushing SAP to continue to expand its product range and add coverage for specific industries. The truth is they want it all:

## An R/3 Primer for Change

**ABAP/4:** The ABAP/4 Development Workbench, SAP's client/server development environment, is an integral component of R/3. By the end of the year, ABAP/4 will be a separate component of the system. This will allow it to evolve on a different schedule than R/3, and will also eventually allow IS organizations to substitute ABAP/4 for other tools. Organizations that simply want to use ABAP/4 to develop satellite applications should also benefit.

**ALE:** Application Linking and Enabling. This is the basic glue that ties R/3 modules to one another. ALE is moving into an important position in the future of R/3: It will be the glueware that ties the different "components" and "satellite" applications together. ALE is also SAP's contender for the industry middleware layer that will tie applications together, including non-SAP products. Look for an ALE interface to Microsoft's Distributed COM (DCOM) object architecture, as well as to Corba and other industry-standard middleware technology, in the near future.

**BAP:** Business Application Programming Interface. A set of interfaces that can be called by external applications and tools to allow access to R/3 internals. BAPs are the basic building blocks of the open R/3 strategy, and will be the way that IS developers, ISVs and integrators build and manage external functionality for R/3. The first set of 100 or so BAPs will begin to emerge this year.

**BOR:** Business Object Repository. BAPs will need objects that can execute their processes, and these "business" objects will be stored in an open repository — the BOR. This quasi-object repository will be a major link in the growth of third-party functionality for IS organizations.

**Components:** R/3 will be split into three major functional components: financials, human resources and logistics. These components will be able to function as discrete "applications" with their own databases or be linked up to one another in a single database. Organizations will be able to maintain and upgrade them independently.

**Satellite Applications:** The rise of ALE, BAPs and the BOR will result in the availability of applications, from SAP as well as third-party and in-house developers, that function independently of R/3 and yet are tightly integrated to R/3 data and processes. These satellite applications will be a major platform for adding new functionality to R/3.



## Q&amp;A

## Plattner: "We Cannot Lock-in the Whole World"

**S**oftware Magazine Editorial Director David R. Brousell and Contributing Editor Joshua M. Greenbaum spent a morning at SAP America's West Coast offices in conversation with Vice Chairman Hassa Plattner about the changes SAP is undertaking with R/3 and the company's relationship with Microsoft, among other issues. What follows are excerpts from that conversation.

**Q:** I had always figured the philosophy of SAP was to really do everything; to be everything to everybody.

**A:** Yes, I don't believe that we've backed off from that position. Not a millimeter do we back off from that position. I want to see our ERP solutions be sufficient for 90% of the market. We cannot lock-in the whole world.

**Q:** R/3 seems to be evolving to be more a platform than an application environment. SAP board member Peter Zencke has said that he believes R/3 will eventually be the infrastructure for IS.

**A:** That was perhaps a misunderstanding. That doesn't mean that we withdraw from manufacturing heavy application components.

**Q:** The new 'open R/3' will mean a trade-off in integration, too. Zencke said in Vienna that you will have to give up some 10% or 20% of the total integration of the system.

**A:** I would argue with him. I think it is too early [to tell]. If we play this right, it shouldn't be a [problem]. If you deal with separate components, the implementation costs go up. There's no question, because we have to deal with two different implementation themes. It is cheaper to use the prefabricated SAP integrated system because the integration works the same.

**Q:** Microsoft wants to own the infrastructure, too. Are the two companies on a collision course?

**A:** One of the questions we have to settle on interfaces.

**Q:** Windows NT is evolving as a leading R/3 platform. Where does NT stand in the R/3 market?

**A:** New shipments vary between 30%

and 40% on NT. These are nearly all in Europe; 5% are in the U.S. Why? It is simply because we are much further down in the [low-end] market in Europe than we are in the U.S. It is moving upwards, but this is not a question about whether NT will eat up Unix. For us, NT is the vehicle to go down to the low end of the market and keep it as simple as possible, and install as quickly as possible.

**Q:** Does Microsoft agree with that strategy?

**A:** Yes.

**Q:** But they recently had an announcement with Baan and Compaq where they basically said: 'NT belongs in the big installations, not the small installations.'

**A:** I'm not opposing that.

**Q:** But is it technically feasible to take NT upstream?

**A:** Yes, I would say high-end NT is in the middle of the Unix systems [in terms of functionality] today.

**Q:** On the development tool side, do you envision something like Visual Basic or PowerBuilder becoming an R/3 development tool?

**A:** Add-ons. Not core development tools. Every company using SAP has a significant team with ABAP/4 knowledge, so we have perhaps a few hundred thousand people in the world programming in SAP technology. We have perhaps 10 times as many people sitting around very small companies doing Visual Basic. Why should we exclude them from having any chance to do a job in an integrated system?

**Q:** What about Sybase SQL Server?

**A:** There is no plan to support Sybase SQL Server at the moment. We had three projects and we failed three times. We need a rest. We already have too many databases.

**Q:** As you open R/3 up, do you envision that you'll have to develop interfaces to

Oracle financials, Baan or any of the other new or emerging competitors?

**A:** SAP shows up with a complete solution [and] the first question from the CFO is, 'Do I have to replace or redo everything I did in the last six months?' For many, many years we lived with other financial systems, because we know that we'll get the financial system in the next five years. We don't walk away if somebody is using a Baan manufacturing system.

Some of these companies will go to a double-vendor strategy. That's another thing that gets totally misrepresented. When Baan gets an installation, why should ABB abandon Baan completely if the implementation was relatively successful? We care, and we are hurt if Hoffman-LaRoche goes to SSA here. Nestle has a clear double-vendor strategy. They always had, and they didn't stop and wait until we had a version for Korea and all these countries: If SSA could supply one, fine.

**Q:** There has been a lot of criticism about SAP after years of nothing but positive press. Has SAP become the big target that everyone loves to hit?

**A:** I don't know why people have so much fun doing that. I meant to ask them.

**Q:** How much have the different changes you're undergoing been driven by criticism that R/3 has been too difficult to implement?

**A:** The clear answer: It's 100% zero.

**Q:** A lot of people in the market feel that the essential issue is not that SAP and R/3 are difficult, but that customers don't manage their expectations correctly. Are you or your partners not telling the customers

how difficult these implementations will be?

**A:** We have to set the record straight first: We have 6,000 implementations now and I don't know whether we have had more than five abandoned. Look at the bigger [competitors]: How many of their implementations have totally failed? SAP has an unbelievable track record of success. So I fully disagree with the criticism. People are telling me: 'You have to live with that. That's the effect of your success.' From our perspective it is totally unfair and doesn't hit the point.







more openness, greater flexibility, lower costs and more functionality. And the pressure from the IS community can be intense — and public.

Henry Clough, an assistant vice president at Nestle USA Inc., Glendale, Calif., minced no words during a presentation at SAP's European user conference last June: "It's hard to keep track of SAP's development, its partnerships and where they are going," he said. The audience applauded enthusiastically.

"We are through the layers of early adopters and the ones who [are willing] to take a risk," acknowledges Plattner. "Now we have the more skeptical ones, and they want to know 'How successful is it? Is there any guarantee you can give me?'"

**W**hile faced with pressure for change from within, SAP is facing growing pressure from outside competitors as well. Though the company is clearly the market leader and still enjoying an annual revenue growth rate of almost 50%, a lot has changed in the market since the salad days of the early '90s. Competition has heated up, though none of SAP's rivals are implementing the across-the-board changes that SAP has in store.

In addition to big rivals like Oracle Corp., Redwood Shores, Calif., which currently has more than 3,000 customers for its applications suite, up-and-coming companies like The Baan Co., Menlo Park, Calif., System Software Associates Inc., Chicago, PeopleSoft Inc., Pleasanton, Calif., and even smaller companies like QAD Inc., Carpinteria, Calif., are making it more of a dogfight in the ERP market.

Netherlands-based Baan, while only one-tenth the size of SAP, is showing up on the radar screen more and more. "With Triton [an earlier version of Baan IV], Baan was ahead of R/3 2.2," said SAP AG Chairman and co-founder Dietmar Hopp, in his keynote speech to the European SAP user conference.

Also dogging SAP has been a more critical analyst community; continuing reports of problems with long, costly implementations; and the elusiveness of key future markets, such as the use of R/3 as the glue to link vendors and their partners and customers in an integrated supply chain. The nadir came when Forrester Research Inc., Cambridge, Mass., issued a flawed but widely circulated report

last spring that cautioned R/3 users to maintain an "R/3 exit strategy."

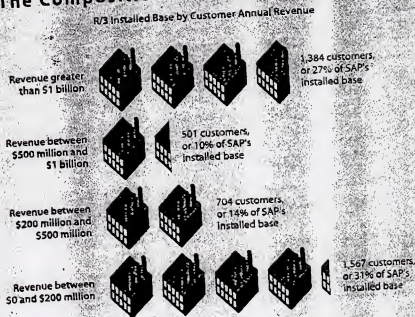
SAP's response to the double imperative of customer-led change and increased competition has been to change the basic R/3 package in several ways. The two leading changes will come in open APIs and a component architecture for R/3.

By the end of the year, SAP will release what it calls its Business APIs, or BAPIs, a set of interfaces that will allow third-party tools and applications to directly access R/3, and exchange data and process information. These BAPIs are in turn setting the stage for an "open R/3" that will be greatly enhanced when R/3 is broken into components sometime in 1998. (See sidebar: "An R/3 Primer for Change," p. 34.)

Reworking the tightly integrated R/3 into components will mean splitting it into three major functional pieces: financials, logistics and human resources. These three modules will be able to exist as separate functional units serviced by one or a number of different databases. Gone will be the monolithic R/3 monster. In its place will be an R/3 model that will be more responsive to customer needs by being able to support a more complex distribution schema. Recob's database issues, for example, should be easily resolved with a component R/3.

R/3 and its open APIs will also be able to support "satellite" applications that tie into the main R/3 system. These could be SAP-developed or third-party products that could add major new functionality or

## The Composition of SAP's Customer Base



(14, or 16% of SAP's customers, are not assigned to an above category)

SOURCE: SAP





domain-specific functionality to the overall R/3 package. Gone will be Chevron's — and everyone else's — problem of having to build their own interfaces.

While SAP is moving to profoundly change its architecture and technology, the company is also moving to change its marketing and technology direction through an increasingly close relationship with Microsoft Corp., Redmond, Wash. This relationship will go a long way toward defining the technology direction of SAP in the coming years.

This is because Windows NT, and to a lesser extent the SQL Server database, are becoming the "first among equals" platform for R/3. For now, Windows NT is the R/3 platform for some 1,200 of SAP's 5,000 customers, a significant number in that this port has been available for just over a year. Coming up quickly is the SQL Server database, which has been available for less time and accounts for about 150 users. The plan calls for NT to figure prominently in the small- to mid-sized market in the short term, and as the NT/SQL Server combination begins to gather experience in larger database configurations, in the large customer market as well.

This is also part of a customer-led change. Low-cost implementation requires low-cost, highly standardized platforms. "You can lay a preconfigured system on top of an NT and SQL Server system that has been preconfigured," says Microsoft Executive Vice President Steve Ballmer. "It will be important to sell [R/3] this way."

Also prominent in the close SAP/Microsoft relationship is Visual Basic, which is already being used by companies like Nestle to develop add-on functionality to R/3. Visual Basic's close ties to NT, SQL Server, Office and other key Microsoft technologies will be well-exploited in an R/3 world that has pointedly left personal productivity issues to Microsoft.

This relationship will become more exclusive with time. SAP's Internet plans, for instance, include an Internet server strategy that is NT-specific. Microsoft has not only adopted R/3 as an internal corporate standard, but is planning to optimize the NT/SQL Server combination above and beyond what it

will do for its other ERP partners, such as Baan.

"There is no revenue that SAP desires that we desire," says Ballmer. "It's a good relationship for both companies."

The final frontier for SAP will be the expansion of the user base toward a broader collection of smaller companies, and the simplification of the implementation process through a combination of technology

## The New Course: A Mixed View From IS

The changes coming in R/3 are definitely on the minds of the managers responsible for implementing current and future versions of the application suite, even though for the most part the new R/3 exists largely on paper. While the overall view is positive, there are a lot of unknowns.

One of the main questions regarding the componentized version of R/3 is how the tight integration will fare in a component model. This is particularly important for user organizations that have bought R/3 precisely because of its tight integration.

"Different companies are going to be on different parts of the continuum of tight integration vs. some sort of federalism," says Craig Leech, SAP project manager at Nova Chemicals, Calgary, Alberta. "The bad news for IS is that there won't be a right answer."

Jim Zell, an R/3 architect at Chevron Corp., San Ramon, Calif., is skeptical that the new R/3 will be for everyone. "A lot of companies are struggling with how many instances of a database you should have," Zell says. "But it remains to be seen what it will do for us."

The open APIs for R/3 are perhaps an easier conceptual leap for user organizations, as the majority of them have been integrating legacy and third-party software the hard way — by brute force — for years. And the concept of satellite applications that add domain-specific functionality to the overall R/3 pack-

age will likely be particularly important for companies outside the mainstream of SAP's core manufacturing user base.

Nestle USA Inc., Glendale, Calif., is one company looking for packaged add-ons to R/3 that might make their way into a satellite application. Reebok International, Scituate, Mass., is another. The peculiarities of the athletic shoe business, which categorizes its products in a three-way color/size/style matrix, mean that some sort of add-on to the standard R/3 package will likely be necessary. "We've created a consortium with another company to develop this," says Reebok's Chief Technology Officer Peter Burrows. "We have some unique requirements."

New platforms are always an important issue, and Windows NT is a big question for some corporate sites. While Reebok is an HP 9000 user, the company is evaluating Windows NT as a potential platform for its local-area network needs. "You can't ignore it," says Burrows. "When you commit to SAP you commit to what they are recommending."

But will NT and SQL Server be able to meet the needs of major users like Chevron? "We don't think NT will scale up to the needs of our largest subsidiary," says Zell. "It has more than 3,000 end users and a 200-gigabyte database." Even Microsoft admits the NT/SQL Server combination is not really up to handling 200Gb. Not yet, anyway.



## COVER STORY

and new integration scenarios.

The technology side of this issue is already available. SAP has been offering tools that allow customers to preconfigure their R/3 systems using a menu-driven selection process that produces a customer-specific subset of the R/3 system. This technology — called Business Engineering Workbench (BEW) — is being used by customers that are now implementing in Version 3.0. According to SAP America Chief Executive Officer Paul Wahl, some 40 customers have gone live in less than six months using BEW.

The low end of the market will see a major change this fall with the introduction of a third-party value-added reseller program that will add a low-cost indirect distribution channel to the current high-end direct sales force. This VAR program, modeled on a successful program in Switzerland, will be specifically targeted to increase SAP's penetration in companies with less than \$200 million in revenue, according to Wahl.

SAP's integration partners are also pushing forward with new, lower cost ways to target customers. ICS Deloitte, Chadds Ford, Pa., the SAP consulting business of Deloitte & Touche LLP, and Andersen Consulting, Chicago, among others, are implementing what they call value-added pricing for their SAP customers. These programs set specific goals and deliverables for an SAP implementation, and reward the integrator for meeting or exceeding these goals.

Such programs are generally seen as the end of open-

ended, time-and-materials contracting for R/3, and will go a long way toward containing costs and meeting expectations among users.

"We will tell you what a monthly use cost is per user, including hardware, software and continuing costs," says Karl Newkirk, the managing partner of Andersen Consulting's SAP practice. "You can look at it like you look at your phone bill."

Along with all this change, of course, will come the inevitable customer backlash. All SAP watchers at some time or another suffer from a technology and direction overload, and when Nestle's Clough complained about that side of the problem in his user conference address, his audience nodded appreciatively. Part of the problem is that some of this change is forced on users: SAP currently only supports two versions of its system, which means that the majority of U.S. R/3 users who are on Version 2.2 will have to upgrade to at least 3.1 before the component version of R/3 hits the market in late 1997 or early 1998. Chevron's Zell will be just finishing his implementation at that point in time, and isn't sure how quickly he'll be ready to move to a new version. "It's a forced continuous improvement," says Zell.

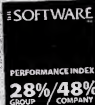
The ultimate question is whether this is good for SAP or not. Can the company continue to force its R/3 customers into what is effectively a continuous, albeit increasingly easy, implementation process? Can perpetual change be good for customers? For many, the answer is a resounding yes. Even as Nestle's Clough complained that it's difficult to "keep track of where they are going," he was laying out his wish list for new functionality and joint development. Over at Reebok, this continuous change was a major reason that R/3 made the final cut. "We are a company that reinvents itself frequently," says Burrows. "One of the things on our wish list is a company that has a vision and invests in their product. We think it's exciting."

In the long run, an element of conservatism must enter all revolutionary movements, and IS reengineering, as fueled by R/3, will almost certainly ease to be cutting-edge as more and more mainstream customers complete their implementations. At that point, SAP will probably be forced to trim its sails and exist more on maintenance revenue than new sales. For now, however, there is little sign that new sales opportunities will dry up anytime soon. In the meantime, SAP's new course will bolster an already strong position in the marketplace. Unless execution problems emerge in that strategy, SAP will hold its position for some time to come. ■

*Joshua M. Greenbaum is a senior analyst with Sentry Market Research and a contributing editor with Software Magazine. He also follows the ERP software market for Hurwitz Consulting Group.*

## SAP At-a-Glance

Parent company:	SAP AG, Walldorf, Germany
Chairman and co-founder, SAP AG:	Dietmar Hopp
Vice chairman and co-founder, SAP AG; Chairman, SAP America Inc.:	Hasso Plattner
U.S. subsidiary:	SAP America Inc. 701 Lee Rd., Suite 200 Wayne, PA 19087 <a href="http://www.sap.com">http://www.sap.com</a>
CEO:	Paul Wahl
Total corporate revenue, 1995:	\$27 billion
Income:	\$404 million
Worldwide packaged software revenue, calendar year 1995:	\$1.35 billion
U.S. packaged software revenue, calendar year 1995:	\$460 million
1995 employees:	6,857



(The Performance Index is the average growth rate in software revenue of the companies in Software Magazine's annual Software 100. From 1994 to 1995, that growth rate was 28%. SAP grew at 48% during that time.)

# KPMG ramps up SAP skills in global recruitment drive

KPMG Management Consulting plans to expand its worldwide SAP capacity over the next few years.

"We are recruiting very heavily," said Steve King (right), partner in KPMG's Implementation and Consulting Group. "We are looking to take on 70 people this year, 50 in SAP and 20 specialists in similar packages, including SAA's BPCS package, Baan's Triton package and PeopleSoft."

He emphasised that the firm is looking for people with at least a year's experience in SAP.

"I wouldn't discount acquisition in the UK, but at the moment there are no negotiations with a third party," said



King. "We have increased our resources in the US and Far East and recruiting from the normal marketplace."

He added that KPMG is looking for people with full

SAP skills, although it had embarked on an worldwide internal training scheme. The firm is also looking for 10 good project managers who have managed successful SAP implementation programmes. The aim is to ensure that staff worldwide can be mobilised.

"We are looking for people with a broad financial, human resource or business background, including qualified accountants," said King. "There is a major need for good, experienced project managers. No one ever has enough."

● SAP has reported record first quarter results: worldwide revenues rose by 40 per cent to DM 690m. Revenues in Europe were up 19 per cent to DM 380m, but were outstripped by growth in the US and the Asia-Pacific region.

Cosima Duggal

## JBA opens doors

JBA has launched its "Open Door" initiative for consultants, offering support, training, information and events relating to JBA's product line. The service has two levels: registered consultant and strategic consultant.

## Newburn health service

Telecoms specialist Newburn Consulting has launched a new service called the Service Chain Health Check, a free service to assess strengths and weaknesses in clients' service delivery chain.

## Coopers alliance

Coopers & Lybrand and Harris Computer Systems have formed an alliance to provide computer security consulting, training and installation services.

## Water work for WS Atkins

WS Atkins has won a framework contract to supply contract staff to develop information systems for the National Rivers Authority. It will continue to supply these services when the National Rivers Authority is merged with Her Majesty's Inspectorate of Pollution (with which Atkins already has a three-year consultancy contract) to form the Environment Agency.

● Object technology is "taking the City by storm", according to a survey of 100 financial institutions by recruitment specialists McGregor Boyall. Over three quarters are already using objects, mainly for front office systems. Reusability was the main reason for choosing object technology, followed by increased quality, the need to follow the market trend towards objects, and lower maintenance costs. Of those not using objects, 71 per cent plan to in the next six to 12 months.

## ON-LINE

### Internet law

Solicitors DJ Freeman have produced a guidance note on contractual aspects of the Internet. Free copies are available from [szl@djfreeman.co.uk](mailto:szl@djfreeman.co.uk) or Tel 0171 556 4166.

### Mercer expansion

Mercer Management Consulting has expanded its Web site, which it says is currently receiving between 10,000 and 20,000 "hits" a week. The site's address is <http://www.mercermc.com>

### VNU launch

A new quarterly Internet publication, *Internet Advisor*, has been launched by VNU Business Publications, publishers of *Management Consultancy*.

the publication is aimed at business users wishing to exploit the Internet for marketing, research and communication.

### Hyperion addition

IT consultancy Hyperion Systems is to develop Internet-based services for the Mondex electronic cash scheme.

### Reader access

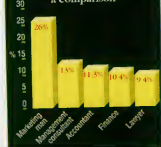
Readers of *Management Consultancy* will be able to access the title on-line through Reuters Business Information. The title will be joined by stablemates *Accountancy Age*, *Business Age* and *Financial Director* as well as publisher VNU's extensive portfolio of IT titles.

## Consultants still trail on telecoms use

Management consultants are catching up in the "communications revolution", but still have a long way to go, according to a report from PC manufacturer Toshiba. Consultants were found to be among the most mobile groups in the survey, with 84 per cent spending up to three days a week out of the office. However, only 50 per cent used mobile phones, and just over a third (37 per cent) use portable PCs for remote access to data.

Of the 13 per cent who used notebook computers, over half had 486 PC machines. However, despite the fact that 91 per cent of users believed that they could recover the cost of a notebook within six months, there is evidence that users are still not making full use of the resource. Less than a quarter used their notebooks regularly, and less than 10 per cent used their notebooks to access on-line services.

Who uses notebook computers when out of the office, a comparison





# Environmental issues can realise Eastern promise

**Canada:** Professional development consultancy Pulvmacher, Stevens and Shack has merged with Deloitte & Touche Consulting Group. Founders Gerald Pulvmacher and Mitchell Shack have joined Deloitte & Touche as partners. Pulvmacher will lead the firm's change management service line in Canada.

**Greece:** investment and management consultancy ICAP Hellas increased profits to Dr 281.1m in 1995 from Dr 204m the year before. Turnover rose to Dr 2.56bn.

**India:** Booz Allen & Hamilton has opened the firm's first Indian office in Bombay. The firm says it plans to open another two to four offices in the sub-continent and use India as a "centre of gravity" to attack the Indian, Chinese and Korean markets.

**Australia:** John Harvey has been appointed chairman and chief executive of Price Waterhouse's operations in Australasia, covering Australia, New Zealand, Indonesia, and Papua New Guinea. Dennis Hall becomes managing partner.

**Netherlands:** Deloitte & Touche has taken over Hiddinck, Rolleman and Slot, which specialises in advice to government and non-profit organisations. The firm will form the basis of a new division at Deloitte & Touche.

**Spain:** Sema has acquired 75 per cent of Infoservicios SA, the IT subsidiary of the Caja de Madrid bank. Infoservicios specialises in systems integration and employs 173 people with a turnover of 1.2bn ptas.

**USA:** Research from the Institute of Management Consultants indicates that 15 per cent of their members have worked for contingency or profit-sharing fees. The proportion was higher among larger firms, where 23 per cent had worked on a contingency basis.

**Australia:** Booz Allen & Hamilton is to expand its information technology practice in the Australian market. The firm will be pursuing contracts with companies like BHP and National Australia Bank.

Environmental issues can determine the success or failure of consultancy projects in Eastern Europe, according to Dr Bernhard Metzger, worldwide director of environmental health and safety consulting at Arthur D Little.

Environmental regulations in the new Central and Eastern European market economies and former Soviet Union countries are in flux," said Metzger. "Very few people know about these new legal requirements, because no one knows how the regulation agencies implement the new environmental regulations."

Metzger says that Eastern European and former Soviet Union countries are very prescriptive and bureaucratic in their methods. For a venture to succeed, he adds, companies need to be clear about the environmental implications long before the financial feasibility



ADL's Metzger: advice

of the venture is even discussed.

Metzger advocates using an "environmental road map", to define costs, manage risk and anticipate obstacles. The five steps essential for consultancies to succeed in the emerging economies are:

- Look into past environmental

requirements and damage and quantify costs.

- Understand and address the new and evolving environmental standards that need to be met in the operation and incorporate those into management plans.

- Get a feeling for the trends in that country: where is the system going? Is it going to become more stringent?

- Ensure adequate funding for technology changes and upgrades.

- Gain environmental indemnity assurance and guarantees from environmental agencies.

Arthur D Little posted increased revenues of \$514m for 1995, up from \$410m in 1994. The growth was fuelled by overseas revenues, now representing 60 per cent of the total. The firm also opened 12 new offices, 10 of them outside the USA, and increased its headcount to over 3,000.

## Amdahl continues push into consultancy with Trecom buy

Hardware manufacturer Amdahl has continued its push into the consultancy and services markets with the acquisition of US-based Trecom Systems for \$145m. Trecom, which has annual revenues of \$140m, specialises in the development of proprietary methodologies for the design of client/server architectures and the reengineering of legacy systems, particularly in the telecoms and financial services markets. Trecom will retain its name and operate as an independent consulting entity.

The move follows Amdahl's acquisition last year of Canadian services and consulting organisation DMR Group after a protracted bidding war. The latest acquisition means that for the first time more than half of Amdahl's revenues are derived from its non-hardware businesses of consulting, services and software. Amdahl chairman Jack Lewis commented: "Strong credentials in

consulting and service permit us to participate fully when a client's business solutions are first conceived, allowing us to add value throughout the life-cycle of information technology projects."

Meanwhile Amdahl has reported a first-quarter loss of \$38.5m on revenue of \$317m, compared with a \$20.5m profit the year before. However, Lewis said that the consulting and professional services businesses had grown during this period.



## MONEY &amp; MARKETS

Major's Stance  
in Beef Scrap  
May Aid PoundEMS  
FOCUS

By NICHOLAS HASTINGS

AP-Dow Jones News Service

LONDON — "Mad-cow" disease has re-

but some analysts believe that British  
Minister John Major's threat to bring  
European Union business to a standstill be-  
cause of members' ban on British beef may  
be so demanding, particularly if it trans-  
fers into badly needed political support.It may do the government some good in  
election polls and help the pound to drift  
upward," said Kevin Gardiner, U.K. econo-  
mist at Morgan Stanley in London. "I don't  
think it is going to have a lasting negative im-  
pact on the currency — quite the opposite."Adam Cole, U.K. economist at HSBC  
Bank plc, also is looking for Mr. Major —  
the pound — to benefit. "I would be sur-  
prised if the Conservatives don't pick up a bit  
in the polls," he said. He pointed to backing the  
minister has received from popular  
supporters at home after he toughened his  
line on Tuesday.The ban on British (beef) exports was  
justified," Mr. Cole argued, suggesting  
the market will now look for a quick resolu-  
tion to the problem and a resumption of nor-  
mal relations.

Risks

However, Mr. Major's move runs two  
ways. The first is an even larger schism with  
the rest of the world — and the pound is  
isolated from the Continent. The second  
is a further split between the pro- and  
anti-European factions to force the government to  
hold an early general election.Mr. Major's initial reaction to Mr. Major's  
statement was muted, though by  
Tuesday morning the currency was being  
traded against the mark. Late in the Eu-  
ro day, the pound was quoted at 2.3269  
marks, down from 2.3365 marks late Tuesday  
morning, but up from a low of 2.3245 marks.  
Although the losses were particularly  
severe, they came against a strong per-  
centage by the dollar against the mark and  
against some fresh domestic concerns over  
the pound, analysts said.Additionally, investors get nervous about  
the pound when Britain's relations  
with Europe flare into conflict. However,  
said Walton, U.K. economist at Goldman  
International, feels there isn't anyMoney-Supply Data Leave  
German Rate Picture Murky

By PHILIP BREATHNACH

Dow Jones News Service

FRANKFURT — The latest German  
money-supply data left analysts uncertain of  
the likelihood of a cut in a key interest rate.The central bank reported that growth of  
the nation's broad M3 money supply slowed to  
a seasonally adjusted annualized rate of 11%  
in April, down from 12% in March, though it  
remained well above the Bundesbank's target  
of 4% to 7% growth in M3 for this year. The M3  
money-supply measure is considered a key el-  
ement in the Bundesbank's rate-setting policy,  
so the slowdown was encouraging to those  
looking for rates to move lower.However, surprising strength in the bank-  
ing component of April's M3 and an im-  
provement in business sentiment as mea-  
sured by the Munich-based Ifo Institute for  
Economic Research discouraged thoughts of a  
cut in the securities-repurchase rate, or repo  
rate, in the near term.Speculation is focused on the May 30  
meeting of the central-bank council that de-  
termines interest-rate policy. The repo rate  
has been frozen at 3.50% since early Febru-  
ary, despite a half-point cut in the Lombard  
and discount rates on April 18 to 4.50% and  
2.50%, respectively.Hermann Rensperger, chief economist at  
BHF-Bank in Frankfurt, says he is uncertain  
whether the Bundesbank will cut the repo rate  
at next week's meeting."The tempo of M3 growth has still re-  
mained fairly high," he said, "but it is mov-  
ing in the right direction."

## 'Strong Expansive Impulses'

The central bank said M3 growth in April  
was moderated by growth in capital forma-  
tion, which counterbalances bank lending.  
However, it also noted a significant increase  
in bank lending to corporate and private cus-  
tomers, which, together with the distribution  
of Bundesbank profits, gave "strong expansive  
impulses" to M3 growth.Bank lending to companies and private in-  
dividuals rose by 23.3 billion marks (US\$15.12  
billion) last month, compared with an in-  
crease of 17.4 billion marks in April 1995. The  
figure could imply increased investment in  
the German economy, analysts said, which  
could well indicate an end to the recent down-  
ward trend in interest rates."But at the same time, it's important to  
note that a lot of bank lending was stimulated  
by the banks' purchasing securities," BHF's  
Mr. Rensperger said, adding that this could  
distort the figures.Mr. Rensperger added that the Ifo re-  
port on the economic climate in western  
Germany also indicated the economy might  
be back on its feet. "However, it's very dif-  
ficult to say with so little data to date," he  
added.The Ifo's index for western Germany  
climbed to 91.9 in April from 90.4 in March,  
showing improved confidence in German  
trade and industry.

## Looking for a Signal

Peter Zwerenz, a bond analyst with West-  
LB Research in Dusseldorf, also expressed  
uncertainty about the economic outlook."I do think, though, that the Bundesbank  
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## THE GOOD NEWS is

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signal to the market that M3 is developing  
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Fahhrkrug said. "And I think we'll see a cut  
in the repo rate at the next opportunity."However, "I think the Bundesbank will  
milk hopes of a rate cut for as long as they  
can," he added, "cutting the repo rate grad-  
ually by a few basis points until it reaches  
3% in autumn, and then leaving it steady for  
for quite a while." A basis point is one-hun-  
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nomic pickup in the second quarter." This  
would imply that the prospects for the bond  
market aren't all that good, he said. How-  
ever, Mr. Fahhrkrug also noted that the bank-  
lending figure was inflated by bank purchas-  
es of corporate bonds.Chunk of SAP  
Held by Hector  
Sells QuicklyBy SILVIA ASCARELLI  
Staff ReporterFRANKFURT — In a quick half-day,  
Union Bank of Switzerland sold half of the  
SAP AG common shares formerly held by one  
of the German software giant's founders.The sale of three million shares, equal to  
nearly 5% of SAP's voting rights, to a broad  
swathe of institutional investors raised \$45  
million marks (\$70.6 million) for the Eugenia  
Trust and the H.W. & J. Hector Foundation.But the remaining 3.85 million shares won't  
be put on the block anytime soon. They cannot  
be sold for at least another six months under  
the terms of a "lockup" agreed to with the  
trustee, a UBS official in London said. That's a  
good sign for existing shareholders, who could  
have seen the value of their holdings decline be-  
cause of additional supply in the market.The sale itself was widely anticipated  
after SAP Chairman Dietmar Hopp revealed  
last week that Hans-Werner Hector, currently  
a member of the supervisory board, had  
signed away control to nearly 10.5% of the  
company's voting rights at the same time that  
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Tuesday's sale may lend credence to that  
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as Mr. Hopp suggested last week.SAP's three other founders still control  
65.68% of the shares. Prior to this week's sale,  
Mr. Hector, his trust and his foundation held  
15.67%. Mr. Hector continues to personally hold  
4.32% of the voting shares, the trust now owns  
4.32% and the foundation, another 5.15%.Mr. Hector was unavailable for comment  
Wednesday. The unnamed trustee, who is in-  
dependent of both Mr. Hector and UBS, de-  
clined to elaborate on his decision to sell the  
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as a reorganization of assets in order to cre-  
ate a more balanced portfolio."From our point of view, there's little to  
say," said SAP spokesman Michael Pfister.  
"Although we expected it, we were surprised  
that it happened so fast. But we think it was  
positive that the market took it so well."In fact, SAP shares, which declined Tues-  
day, bracketed a falling DAX blue-chip index on  
Wednesday. Common shares climbed 1.50  
marks in all-day electronic trade, to 199  
marks each. The more liquid preferred  
shares, which are part of the DAX index, rose  
0.50 marks to 203.50 marks.



& MARKETS

Heard on the Street .....	18	Small-Stock Focus .....	18
Index Options .....	23	U.S. Listed Options .....	23
Money Rates .....	26	U.S. Market Statistics .....	26
Nasdaq Stocks .....	22	U.S. Treasury Issues .....	28
NYSE Stocks .....	19	World Bonds .....	27

Money-Supply Data Leave German Rate Picture Murky

By POILIN BREATHNACH  
Dow Jones News Services

FRANKFURT — The latest German money-supply data left analysts uncertain of the likelihood of a cut in a key interest rate.

The central bank reported that growth of the nation's broad M3 money supply slowed to a seasonally adjusted annualized rate of 11% in April, down from 12% in March, though it remained well above the Bundesbank's target of 4% to 7% growth in M3 for this year. The M3 money-supply measure is considered a key element in the Bundesbank's rate-setting policy, so the slowdown was encouraging to those looking for rates to move lower.

However, surprising strength in the bank-lending component of April's M3 and an improvement in business sentiment as measured by the Munich-based Ifo Institute for Economic Research discouraged thoughts of a cut in the securities-repurchase rate, or repo rate, in the near term.

Speculation is focused on the May 30 meeting of the central-bank council that determines interest-rate policy. The repo rate has been frozen at 3.30% since early February, despite a half-point cut in the Lombard and discount rates on April 18 to 4.50% and 2.50%, respectively.

Hermann Rensperger, chief economist at BHF-Bank in Frankfurt, says he is uncertain whether the Bundesbank will cut the repo rate at next week's meeting.

"The tempo of M3 growth has still remained fairly high," he said, "but it is moving in the right direction."

**'Strong Expansive Impulses'**

The central bank said M3 growth in April was moderated by growth in capital formation, which counterbalances bank lending. However, it also noted a significant increase in bank lending to corporate and private customers, which, together with the distribution of Bundesbank profits, gave "strong expansive impulses" to M3 growth.

Bank lending to companies and private individuals rose by 23.3 billion marks (US\$15.12 billion) last month, compared with an increase of 17.4 billion marks in April 1995. The figure could imply increased investment in the German economy, analysts said, which could well indicate an end to the recent downward trend in interest rates.

"But at the same time, it's important to note that a lot of bank lending was stimulated by the banks' purchasing securities," BHF's Mr. Rensperger said, adding that this could distort the figures.

Mr. Rensperger added that the Ifo report on the economic climate in western Germany also indicated the economy might be back on its feet. "However, it's very difficult to say with so little data to date," he added.

The Ifo's index for western Germany climbed to 91.9 in April from 90.4 in March, showing improved confidence in German trade and industry.

**Looking for a Signal**

Peter Zwierenz, a bond analyst with WestLB Research in Duesseldorf, also expressed uncertainty about the economic outlook.

"I do think, though, that the Bundesbank will have to give a small signal that M3 is

**THE GOOD NEWS** is that headline M3 growth is slowing, which should benefit the short end of the (bond) market," says Holger Fahrkrug, senior economist at UBS in Frankfurt.

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Holger Fahrkrug, senior economist at Union Bank of Switzerland in Frankfurt, also believes the Bundesbank will have to give a signal to the market that M3 is developing favorably.

"The good news is that headline M3 growth is slowing, which should benefit the short end of the (bond) market," Mr. Fahrkrug said. "And I think we'll see a cut in the repo rate at the next opportunity."

However, "I think the Bundesbank will milk hopes of a rate cut for as long as they can," he added, "cutting the repo rate gradually by a few basis points until it reaches 3% in autumn, and then leaving it steady for for quite a while." A basis point is one-hundredth of a percentage point.

"The bad news is that bank lending accelerated so strongly," Mr. Fahrkrug said, "which we see as further evidence of an economic pickup in the second quarter." This would imply that the prospects for the bond market aren't all that good, he said. However, Mr. Fahrkrug also noted that the bank-lending figure was inflated by bank purchases of corporate bonds.

Chunk of SAP Held by Hector Sells Quickly

By SILVIA ASCARELLI  
Staff Reporter

FRANKFURT — In a quick half-day, Union Bank of Switzerland sold half of the SAP AG common shares formerly held by one of the German software giant's founders.

The sale of three million shares, equal to nearly 5% of SAP's voting rights, to a broad swathe of institutional investors raised 585 million marks (\$379.6 million) for the Eugenia Trust and the H.W. & J. Hector Foundation.

But the remaining 3.85 million shares won't be put on the block anytime soon. They cannot be sold for at least another six months under the terms of a "lockup" agreed to with the trustee, a UBS official in London said. That's a good sign for existing shareholders, who could have seen the value of their holdings decline because of additional supply in the market.

The sale itself was widely anticipated after SAP Chairman Dietmar Hopp revealed last week that Hans-Werner Hector, currently a member of the supervisory board, had signed away control to nearly 10.5% of the company's voting rights at the same time that he created the Eugenia Trust. While Mr. Hopp depicted the transaction as a "mishap," analysts were inclined to believe it was deliberate. Tuesday's sale may lend credence to that view, particularly if Mr. Hector still controlled the shares placed with the foundation, as Mr. Hopp suggested last week.

SAP's three other founders still control 65.69% of the shares. Prior to this week's sale, Mr. Hector, his trust and his foundation held 15.57%. Mr. Hector continues to personally hold 4.33% of the voting shares, the trust now owns about 5.89%, and the foundation, another 0.51%.

Mr. Hector was unavailable for comment Wednesday. The unnamed trustee, who is independent of both Mr. Hector and UBS, declined to elaborate on his decision to sell the shares. However, the UBS official described it as a reorganization of assets in order to create a more balanced portfolio.

"From our point of view, there's little to say," said SAP spokesman Michael Pfister. "Although we expected it, we were surprised that it happened so fast. But we think it was positive that the market took it so well."

In fact, SAP shares, which declined Tuesday, bucked a falling DAX blue-chip index on Wednesday. Common shares climbed 1.50 marks in all-day electronic trade, to 199 marks each. The more liquid preferred shares, which are part of the DAX Index, rose 0.90 marks to 203.50 marks.





# SAP

12.05.96

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CONSULTING

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Tel: 01438 310155 Fax: 01438 310131

Our clients are major consultancies, offering exciting opportunities on a variety of SAP projects worldwide. Some include cross training from R2 to R3. We currently seek the following skilled SAP professionals: documenters, trainers, programmers, analysts, project managers and users with relevant modular experience. We also have some senior vacancies in Canada & USA at Partner level within a major consulting firm.

Kestrel will be at the following locations over the next few weeks: Central London, Heathrow, Gatwick, Surrey, Manchester, Birmingham, Warwick, Bristol, Milton Keynes, Aberdeen, Glasgow, Shannon and Dublin. If none of these locations are convenient, alternative arrangements can be made to meet with you and discuss your SAP career options.

**For further information please phone, fax or post your CV, detailing your SAP experience to Mark Harris:**

A challenging opportunity has arisen for an energetic and bright qualified accountant, to join a FTSE 100 subsidiary in the Engineering industry.

The company supplies equipment to the animal feed industry, with headquarters in Hull and operations throughout Europe.

Reporting directly to the Managing Director this is a key role in the organisation. The main responsibilities are to:

- play a key role in the commercial management of the business
- manage finance departments in the UK and Holland
- oversee the implementation of a major IT system upgrade

The successful candidate will be a degree educated, qualified accountant with a minimum of 5 years post-qualification experience. The Finance Director must have experience of working in an engineering and/or manufacturing environment, with knowledge of product costing & product line profitability. Strong IT skills are also required.

This is a broad, 'hands on' role and requires an all-rounder. The position will provide a challenge for an ambitious professional and there are further career opportunities within the Tate & Lyle Group.

Please send your CV stating current remuneration details to the Human Resources department, Dexter House, 2 Royal Mint Court, London EC3N 4PE.

The closing date for applications is 24 May 1996.



*"With Windows NT and Intel Pentium processor-based platforms, we are entering a whole new market segment. The price-performance exceeds that of classic mid-range enterprise systems. Plug and Play is becoming a reality."*

- Dr. Hasso Plattner, Co-Founder and Vice Chairman, SAP AG

### R/3 Three-tier Client/Server Architecture

As companies embrace true business reengineering, they find it requires a pervasive, even relentless, reexamination of every aspect of their organization. You simply can't reengineer your company a department at a time. As a result of these organizational overhauls, companies usually find it necessary to institute a new corporate-wide information structure that links every part of the company.

SAP has provided that enterprise-wide linkage for thousands of organizations all over the world. SAP's R/3 for Windows NT is an enterprise-wide software suite that runs in a distributed client/server environment and addresses the entire spectrum of business needs: logistics, sales and distribution, materials management, production planning, plant maintenance, quality management, budget control, financial accounting, assets management, human resources and more. Modules are fully and seamlessly integrated so that mission-critical data is accessible from all parts of the company and even between companies. R/3 is highly scalable, accommodating anywhere from ten to thousands of users. It's extensible with third-party software, enabling users to customize solutions to meet unique requirements. And it uses a state-of-the-art three-tiered client/server architecture, separating the database, the applications and the graphical user interface. That gives companies tremendous flexibility in configuring their information system.

R/3 Three-tier Client/Server Architecture



[Click to get larger scale image \(76 KB\)](#)

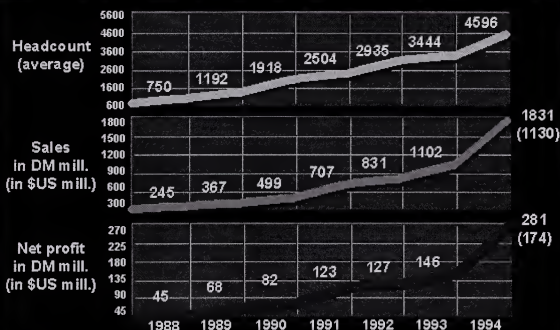
The Intel-Microsoft-SAP team makes for a very compelling combination. R/3's deployment across client/server networks is enhanced by the Windows NT operating system. And the price/performance and scalability of Pentium processors based systems makes it easy to deploy servers and clients wherever information is needed.





## CORPORATE PROFILE

### Headcount / Sales / Net Profit



Status: March 31, 1995

© SAP AG

CPB 6/97/1

The complete Company Profile is also available as zipped [PowerPoint file \(1.7 MB\)](#).

To view this file you need Microsoft PowerPoint 4.0 or the [PowerPoint Viewer](#).

**BACK**

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## Analysts Recommend

## What's the Big Deal About the Big Six?



STANLEY KATZ JR. FOR ENR/REUTERS

than one machine getting the same address. As many of you already know, this can be an all-too-common and all-too-aggravating problem in growing IP nets where lots of PCs (and people) move around from one office to another.

The cost? \$1,500 per UNIX server (Sun-OS, Solaris, and DEC UNIX only, for now) for up to 300 IP addresses. Ask us, and at \$5 a hookup, this one is worth a look, especially since it can take up to an hour per desktop of your valuable IS time to set up IP networks and keep their addresses clean. For more information circle 102 on the Reader Service Card. —FM

## Give Your PC Apps a Voice of Their Own

SOUTHBOROUGH, MASS. • Remember how Star Trek captains Kirk and Picard could simply ask their on-board computer a question and get an answer right quick—without ever having to look at a Windows screen?

Well, a small but growing New England developer is poised to beam down to your enterprise an affordable text-to-speech technology that could begin delivering some of that same capability to you and your crew.

**Technically Speaking's** ReadIt text-to-speech conversion package lets your users embed voice responses and voice files in documents, as well as create voice responses and voice prompts to ASCII files, database queries, and other common text-only formats. And, what's more, you can get versions that work in 14 different languages.

But before boldly going into this brave new world, you should know that ReadIt is specially tuned for TSI's Show N Tel computer/telephony application development environment and is based on **Berkeley Speech Technologies'** BeST-speech TTS-Soft text-to-speech technology. The magic of text-into-speech conversion, which does not require any expensive add-on hardware, is enabled by a series of Show N Tel development objects, called VoiceSentence. These VS objects weave prerecorded speech with

The lion's share of independent consultants helping users implement SAP America's R/3 client/server integrated applications these days work for one of the Big Six firms. These firms all have broad credentials in technology and business consulting, but their R/3 practices vary considerably. Here's a look at the effort the Big Six firms put into training their R/3 teams:

**Andersen Consulting**, Cleveland. Andersen's consultants complete a five-week SAP course, another two weeks of training, and a few months of hands-on practice with Andersen's own industry templates. So these consultants (who, in addition, have several years of software implementation experience) are ready for their first projects after some five months of SAP-specific training.

**Coopers & Lybrand**, Philadelphia. Each SAP project involves a partner at the head, a project manager, and an equal number of what Coopers & Lybrand calls "team leaders"—individuals who have been through SAP implementations—and "foundation consultants"—certified staffers on their first project.

**Deloitte & Touche Consulting Group**/ICS, Chadds Ford, Pa. Some 56% of the 1,300 consultants here have at least two years' SAP experience; 30% have more than four years' experience. Deloitte's methodology is called FastTrack For SAP, which consists of a detailed, step-by-step project plan of what to do when implementing certain SAP modules and includes aspects of reengineering, change management, training, and documentation.

**Ernst & Young**, Atlanta. E&Y offers its own five-week intensive-training program for its consultants and clients, which is sanctioned and certified by SAP. It involves general training and then specialized module training. Fifty percent of E&Y consultants in the field have 2+ years of R/3 experience, which means, obviously, that 50% don't. That other half could have anywhere from two months to 23 months of R/3 experience.

**KPMG Peat Marwick**, Radnor, Pa. KPMG is one of the firms aggressively going after people from the competition who have 2+ years of R/3 experience in the U.S. or Europe. KPMG's basic strategy is to convert people with at least five years of general-consulting experience into SAP consultants. KPMG offers its own training program for its own people and some clients at four sites. The length of classes depends on who's being trained, but all consultants must go through 120 hours of training every three years. SAP certifies the courses and administers the exams. KPMG has a 95% pass rate.

**Price Waterhouse**, Linthicum, Md. PW found it too difficult to get into SAP's own over-subscribed SAP-certification courses, so the firm started its own classes, which are also always over-subscribed. PW trains mostly its own consultants but also a few clients, as well, and can run 1,000 people a year through its program. The course entails an overview, detailed track study, and a case study at the end. SAP then gives everyone a certification test. Partner Chris Everett says that 99% of the students pass. All PW consultants must go back for two weeks of advanced training annually in specific modules.

—Emily Kay writes on technology from Chelmsford, Mass.

variables retrieved from database queries (defined graphically or via SQL objects) to create an application's voice response and prompts.

The new software allows Show N Tel applications to support upwards of 30 concurrent synthesized speech processes on a single Pentium PC. Applications

are also designed not to be processor hogs, since text-to-speech resources can "float" from phone line to phone line as needed by callers. This "on-demand" feature means that a single Pentium can support up to 96 incoming lines.

Oh, just one more thing. It only works on OS/2 for now. (Continued on p.20)





## Desperately Seeking SAP Support

Seeing as there are only 18,000 consultants to help the entire world deploy R/3, you can easily be hit by high rates and low levels of experience.

By Emily Kay

The IS director for a large manufacturing company has a dilemma. As a newly inked SAP America customer, the technology chief wants to remain mum on his company's decision to implement SAP's R/3 client/server software for fear he'll lose his internal computing staff. The competition? Big Six consulting firms--including the one he's paying to help deploy R/3--and all of the other companies out there that are rabidly recruiting anyone with the tiniest bit of SAP R/3 experience.

"There's a shortage of qualified people, and the big consulting firms are snapping them up at unbelievable salaries," says the IS director. "Analysts who were making \$50,000 to \$60,000 are drawing \$85,000 to \$90,000 after only a year's experience." Are these so-called R/3 experts worth the big bucks they're commanding?

Maybe not.

"They don't know that much, but they do know more than anyone else. It's a bidding frenzy, fueled by the Big Six trying to build staff to come back and charge enormous amounts of money to help you install the system," he says.

Anyone even tangentially involved in deploying client/server applications knows that R/3 is the hottest software package this side of Windows95. It's an enterprisewide set of client/server applications for managing accounting, manufacturing, distribution, and human resources. SAP has sold \$2 billion worth of new software licenses worldwide in the last two years, according to the market research firm Gartner Group in Stamford, Conn. The service market that has grown up around SAP is even more impressive. Gartner estimates that 18,000 R/3 consultants and integrators worldwide will rake in more than \$5 billion this year. And although new firms are jumping into this market constantly, 90% of the consultants work for either SAP, the Big Six, or five other large integration firms (see [An R/3 Consultant Scorecard](#), p. 43).

### SUPPLY AND DEMAND

The shortage of R/3 consultants means you may get stuck with consultants who have only six months' training but charge up to \$2,500 a day, says a network administrator at a large oil company. "We'd like to do something about it, but we can't find anyone. It's so hard to find good SAP people who understand the system, even after extensive interviews, site visits, and references."

Consulting firms are eager to tout their experience, but their R/3 teams are not necessarily veteran SAPers. Before committing yourself to a consulting outfit's services ask:

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And you should consider other benchmarks beyond just the matters of certification and experience. With a product as broad and complex as R/3, **specialization within the product's many functions may also be needed** (see sidebar, "How To Find the Right SAP Consultant," p. 45). Vinnie Mirchandani, a Gartner research director, says SAP needs a certification process that better defines who needs what parts of R/3. "It's evolving and will eventually get there," he says, adding that a five-hour test for a product with thousands of parameters is bound to be superficial.

To be sure, SAP acknowledges past problems with R/3 support. "In the early days, 1992 to 1993," says Ott, "there was no one with R/3 experience because it was a brand new product." He expects that the 5,000 North American consultants available by now will help overcome the shortage of consultants in the market. Gartner Group expects the worldwide population of R/3 consultants to double by early 1996, but that won't necessarily improve support. "Out of 18,000 [consultants worldwide], fewer than 500 have done more than two R/3 implementations from end to end," says Mirchandani.

#### Chain Your Staff Down

#### Will You Be Sapped by SAP Consultants? **"OUTRAGEOUS"**

Paying up to \$2,500 a day for a consultant rubs technology chiefs the wrong way--especially if what they're paying for falls short of expectations. "The prices are too high for SAP, that's for sure," says the oil company network manager. His firm, which has laid out some \$50 million for R/3 support, has fired several ill-prepared consultants. "They charge outrageously" for technicians with three months' SAP experience, he says. They also run into problems they may never resolve, and they never send the same person twice. "You don't know what you'll get the next time you do an upgrade. It's a nightmare."

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Orbitant costs have also pointed some businesses toward competing products. Hoffman Engineering, an electrical enclosure manufacturer, chose applications from J.D. Edwards because of their better manufacturing functionality and because SAP would have cost 160% more--largely for consulting services, says Pat Warner, Hoffman's IT VP in Anoka, Minn.



Consultants counter that not all R/3 projects cost a fortune. Tactical implementations like The Seattle Times' deployment of R/3's financial function (88 days, according to SAP), take far less time and cost much less than strategic projects like, say, IBM's enterprisewide application, says Chris Everett, partner in charge of Price Waterhouse's global SAP practice in Baltimore. "Everyone says it takes forever and costs zillions" to implement R/3, says Everett. "That's not true."

Despite the resentment about costs, industry experts caution CIOs not to focus solely on price to evaluate SAP providers. An individual high-level R/3 consultant is going to make up to 15% more than a consultant on a typical client/server engagement, according to Gartner. Above and beyond costs, businesses should focus on the consulting team, some 20% of which should have solid R/3 experience, says Mirchandani.

#### How To Find the Right SAP Consultant

##### **METHODOLOGIES**

Companies should look not only for R/3 experience and business expertise but also for a software implementation methodology, says SAP's Ott. "There are tools out there making implementation faster and easier," hesays. In fact, most consultants tout their unique SAP toolkits and methodologies. Siemens Nixdorf, for example, has parlayed its own internal 70,000-user SAP installation into a set of commercial tools that it claims cuts months off configuration. The IS director with a large manufacturing company chose ICS partly for its SAP-based FastTrack methodology.

Analysts believe, however, that there's little difference between methodologies, most of which are generic processes adapted to SAP. "Everyone says they do a feasibility study, set and review goals, do a small pilot," says Harry Tse, computing research director with the Yankee Group, a market research firm in Boston. Herbert G. Vinnicombe, a partner with Coopers & Lybrand in Philadelphia, agrees. "Everyone has a system development lifecycle approach," he says.

More important are templates specific to each industry. Price Waterhouse built its first consumer goods template from an early R/3 implementation for Borden's North American foods division. Now others in the same industry--Keebler, for example--can look at a generic product to figure out how it works for its business or go to Price and "see what Borden is doing with it, and load it with SKUs they recognize," says Everett. By the way, that's another surprise you may be in for: Consultants consider these templates their property--not your competitive advantage.

In the end, corporations must scrutinize the degree of their need for R/3. The first caution is not to be seduced by the SAP craze. Companies have floundered because they have jumped on the SAP bandwagon when they really didn't need full-blown R/3 functionality. "There are definitely people who overbought the product for their needs," says Yankee Group's Tse.

Companies' should focus less on R/3 and more on meeting business goals, warns Gartner's Mirchandani. Companies choose integrators "based on handshakes, resumes, and two-page RFPs, and then come back and blame the integrators," he says. "Some fault lies with the companies themselves for not running a better process."



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Emily Kay is a freelance writer in Chelmsford, Mass., and a frequent contributor to DATAMATION.

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### An R/3 Consultant Scorecard

*Here's Gartner Group's fix on who's doing R/3 consulting, where they're doing it, and how well they're doing. For information from ALL of these service providers, circle 170 on the Reader Service Card. For information from specific vendors, circle the appropriate numbers or contact the vendors individually.*

Company/Circle No.	Circle No.	Total Consultants	U.S.	Europe	Rest of World	Implementation Capabilities Rating
Andersen Consulting 312-507-9803	171	3,200	1,400	1,200	600	Strong everywhere
Bull HN Information Systems 508-294-6000	172	NA	NA	NA	NA	Average in Europe
Cap Gemini Sogeti 513-563-6622	173	1,025	200	800	25	Strong in Europe, average in U.S.
Coopers & Lybrand 215-963-8530	174	1,000	180	520	300	Strong in Europe, average elsewhere
CSC National SAP Practice 212-532-1500	175	750	150	475	125	Average in Europe, needs improvement elsewhere
Deloitte & Touche/ICS 610-558-7570	176	1,400	900	200	300	Strong everywhere
DDS 612-332-5200	177	NA	NA	NA	NA	NA
EDS 800-724-3316; 214-604-7380	178	NA	NA	NA	NA	Average in Europe, needs improvement elsewhere
Ernst & Young 404-817-5435	179	700	425	225	50	Strong in Europe, average elsewhere
Hewlett-Packard 800-752-0900	180	400	140	220	40	Needs improvement everywhere
IBM/ISSC 770-644-5501		1,400	250	1,000	150	Average everywhere
KPMG Peat Marwick 610-995-4400	181	1,000	400	450	150	Strong in Europe, average elsewhere
Price Waterhouse 410-691-7314	182	1,800	1,100	350	350	Strong everywhere
Origin Technology 908-506-1700	183	725	150	550	25	NA
SAP America 800-872-1727; 610-725-4500	184	2,800	930	1,550	320	NA
Siemens Nixdorf 800-225-1484	185	NA	NA	NA	NA	Average in Europe, strong in rest of world

Source: Gartner Group, DATAMATION

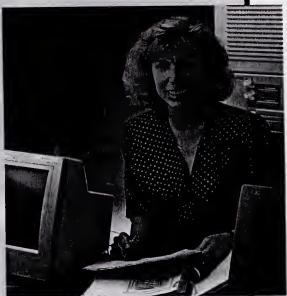
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# Chain Your Staff Down

**K**eeping IS staff with SAP savvy is getting to be as hard as retaining Sybase DBAs. "We're losing people to anyone out there," says Ruth Rowedder, IS manager with Pentax, the camera and lens distributor in Englewood, Colo. Rowedder and her staff get several calls weekly from recruiters, the Big Six, and other companies. She recounts the reaction of a woman she met at SAP's recent user conference. Upon learning that Rowedder had gone live with R/3 at Pentax, "she asked me if I wanted a job," Rowedder says. "It's vicious right now." So vicious that Pentax has lost four of its original 12-person R/3 implementation team within the last year.



that the 5,000 North American consultants available by now will help overcome the shortage of consultants in the market. Gartner Group expects the worldwide population of R/3 consultants to double by early 1996, but that won't necessarily improve support. "Out of 18,000 [consultants worldwide], fewer than 500 have done more than two R/3 implementations from end to end," says Mirchandani.

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How much does R/3 help cost? The following lists average hourly billing rates for SAP and leading independent consultants. K-levels are SAP's own categorization of consultants.

Position	SAP (\$/hr)	Independents (\$/hr)
Vice President, Practice Manager, Partner	NA	400-500
Sr. Technology or Industry Specialist	NA	300-400
Program Director	NA	200-500
K-5 Consultant Manager	240	300-325
K-4 Project Manager (4 years' SAP experience)	200	250-275
K-3 Sr. Consultant (2-4 years' SAP experience)	175	200-225
K-2 Consultant (1 year SAP experience)	150	175
K-1 Jr. Consultant (1 year or less SAP experience)	125	150

Source: Gartner Group



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## How To Find the Right SAP Consultant

Corporations have to do their homework before hiring SAP service providers. "Users should be overly zealous in checking references of [consulting firms'] individual project managers and staff," contends Bonnie Digrius, VP and research director at the Gartner Group. And don't just look for R/3 experience, cautions Gartner research director Vinnie Mirchandani. In-depth industry and business knowledge are equally important. Gartner and others offer the following recommendations for corporations seeking R/3 consultants:

► **Require a project manager to have solid experience on at least one R/3 project,** and stipulate that at least one-third of the project team have real SAP installation experience. For particular SAP projects, the ratio of experienced SAP consultants to newly educated individuals is often as high as 1 to 10, Digrius points out.

► **Just as critical, make sure the consultants know R/3's limitations** so they can recommend buy-or-build alternatives that fill holes in SAP's product line. "A good integrator can be objective and point out where SAP is weak," says Mirchandani.

► **Require more than a product-only focus,** which, says Mirchandani, "allows consulting firms to offer staff that are fresh out of vendor training—product-certified personnel with little live implementation experience."

► **Be aware that chemistry is critical.** Because companies will be working with consultants for several months, Herbert G. Vinnicombe, a partner with Coopers & Lybrand, urges companies to evaluate carefully whether potential consultants' corporate cultures and philosophies mesh with theirs. "Spend time with [the core team you'll work with], not one hour," says Vinnicombe.

► **Build the name of the project manager into your contract.** State that the manager can leave the project only with the concurrence of your corporation, which also must approve any replacement. Consulting firms often bid on several projects at once, promising the same consultants to each.

► **Don't judge vendors solely on price.** In a recent survey, Gartner clients rank price as the fifth most important decision criterion, behind past relationships, industry expertise, application expertise, and project management capability. "Assess the strategic nature of the project at hand to determine the importance that price should play," says Digrius.

► **Bear in mind that the ultimate goal is not to implement R/3** but to reap radical improvements in business processes using the technology. So require world-class benchmarks for the business processes the R/3 implementation will be changing—like two days to close books or \$1.50 to process a payroll check. Consultants "should help redefine the function, not simply help with the lateral move to new software," says Mirchandani.

► **Require that a vendor "share and leverage other clients' experience"** through groupware, competency centers, shared specialists, and product configuration tools.

► **Require technological expertise beyond SAP.** Consultants should provide technology labs to simulate scenarios and benchmark performance issues. Configuring, synchronizing, testing, training for, and rolling out three-tier client/server architectures "is not a science yet," notes Mirchandani.

SAP bandwagon when they really didn't need full-blown R/3 functionality. "There are definitely people who overbought the product for their needs," says Yankee Group's Tse.

Companies' should focus less on R/3 and more on meeting business goals, warns Gartner's Mirchandani. Companies choose integrators "based on hand-

shakes, résumés, and two-page RFPs, and then come back and blame the integrators," he says. "Some fault lies with the companies themselves for not running a better process." ❧

EMILY KAY IS A FREELANCE WRITER IN CHELMSFORD, MASS., AND A FREQUENT CONTRIBUTOR TO DATAMATION.





09103/95.

## NEWS ANALYSIS

COMPUTER WEEKLY 13 APRIL 1995

# The discontent with SAP rises

**M**OUNTING criticism of German software giant SAP and its R/3 financial software has shaken many users in its home country.

Recent attacks from German users are couched in terms more akin to a marital break-up than a dispute between Europe's largest software products company and some of the world's largest corporations.

Their sense of betrayal can, perhaps, be put down to

Concerns of SAP customers are keenly felt all over the world. **Phillip Inman** looks at the German firm's problems

the disappointment they feel in having to criticise a German success story, or perhaps it relates to the strong belief in partnership with a supplier that has sustained many of them through bad times as well as good.

Whatever the reason, the concerns of SAP customers are being keenly felt, not only in Germany but in SAP offices around the world.

In the UK, the company has changed the whole pay structure for its 104 employees. It has switched from a system that rewards the staff for increased sales to one that takes account only of customer satisfaction. This will be recorded in a lengthy survey involving face-to-face in-

terviews and a questionnaire.

The firm hopes the whole exercise will give staff the incentive to increase the technical and consultancy support available to customers – the main criticism levelled against SAP in this country.

Meanwhile, German users have more specific concerns R/3 software itself.

R/3 has long been held up as one of the first enterprise-wide client/server software products that can offer a high degree of integration for widely distributed multinational companies.

Its predecessor, R/2, was an IBM mainframe product that ranked alongside similar offerings from **Dun & Bradstreet**. Computer

Associates, Walker International and QSP. Most multinationals would use all these financial software products, covering areas from sales invoicing to their general ledger, somewhere in their worldwide organisation. And they were happy with limited integration capabilities as long as the software complied with the holding company's reporting procedures.

But the development of R/3 promised a brave new world. It held out the possibility of downsizing and giving frontline staff greater flexibility, because of its sophisticated, distributed Unix-based software. And its high degree of integration gave firms the chance to "re-engi-



British Rail is a SAP customer thought to be implementing R/3

neer" hundreds of middle managers out of their business.

But German consultant TSE in Hamburg said that R/3 faced a series of problems. It claimed that R/3 was more complicated than users were led to believe, with many having to recruit extra staff. In the UK that can mean paying more than £75,000 a year for an R/3 programmer with knowledge of the latest version.

It added that the software was inflexible when users found part of their business needed changing and the cost of any adjustments was "unjustifiably" high.

Düsseldorf-based firm Hortens has a separate prob-

lem. It is an R/2 user looking to use R/3, but has hit trouble with software upgrades as it migrates from one to the other.

German electronics giant Siemens, similarly, had an emotional battle with SAP last year when it rejected the R/3 human resources module. Siemens had committed itself to R/3 in general but not the whole package.

SAP UK believes it has solved the support problems which could have led to project delays or cost overruns on users' sites. But if the criticism levelled at the internal workings of the software in Germany spreads to other countries, the company could be in for a rough ride.

### Who uses SAP?

Its biggest customers include:

- British Rail
- Nestlé
- North West Water
- Lever Industrial
- Fujitsu

# information service





6104/95

COMPUTER WEEKLY

**S**AP software has taken the corporate world by storm. For the past few years, the German financial and manufacturing application software company has enjoyed extraordinary success, as one major company after another signed up for its client-server R3 product.

But recently SAP has been drawing criticism from users in the UK and Germany over the large costs of implementation and chronic project overruns.

Last week saw the company fighting back against accusations that R3 is not up to the task set for it by users who want to unify all their disparate systems and downsize off the mainframe. There has been considerable criticism of the company's products in its home country, but SAP has responded aggressively by suing a German magazine for libel.

It has also issued a written denial of allegations that it receives payoffs from hardware companies when it recommends their products to customers. However, the real issue in the UK is whether SAP and its users have been imprudently over-enthusiastic about R3.

"Everyone was carried away with euphoria," said Chris Cadman of market research company Input.

Around 110 organisations in the UK are implementing R3, and more than half are already using some of it live. They include British Rail, North West Water, Unilever, Nestlé

Companies' infatuation with SAP's R3 client/server accounting and manufacturing package is over. **Julia Vowler** examines the reasons behind their change of heart

**KNIGHT ...** "R3 is extremely hungry for disc space - we're looking at about 10Gbytes per database"



# SAP's honeymoon comes to an end



whether SAP and its users have been imprudently over-enthusiastic about R3.

"Everyone was carried away with euphoria," said Chris Cadman of market research company Input.

Around 110 organisations in the UK are implementing R3, and more than half are already using some of it live. They include British Rail, North West Water, Unilever, Nestlé, Courage, Texaco and BP.

R3's main strength is that it was the first of the major accounting and manufacturing packages to be re-written as a client/server product and hit the market at the height of the downsizing frenzy.

"R3 was written from the bottom up more than three years ago and cost us \$200m," said Trevor Salomon, SAP's business development manager. "It is not just a mainframe port."

R3's three-tier architecture puts the end-user software on the client PC, the application software on one server and the associated database on a separate server.

"Unlike other client/server products, we have a dedicated application server so you can increase the number of applications and modules but you still only need the one database," said Salomon.

For some users this may be a disadvantage. "It's not easy distributing the database, because R3 has a centralised configuration, like a mainframe, even though it runs on Unix," said accounting software analyst Dennis Keeling.

This, he said, made R3 less scalable than many ex-

# SAP's honeymoon comes to an end

06/04/95

pected, and made it less suitable for deploying across multiple small departmental units.

However, according to Chris Knight, European IT manager at pharmaceutical company Syntex, and chairman of the R3 users' technical group, "few packages of this complexity could run well on a distributed database."

Knight does agree that R3 is not a lean machine.

"It is extremely hungry for disc space - we're looking at about 10Gbytes per database," he said. "But disc storage is only around £1,000 per Gbyte for Unix systems."

Nor was R3 entirely bug free.

"The manufacturing modules contained some basic programming bugs which were mostly trivial, causing a rollback rather than a crash. And SAP offers a good service in downloading patches," said Knight.

But the major technical concern is about R3's flexibility - or lack of it - and its impact on implementing the software.

"The mainframe version, R2, was incredibly flexible, which made implementation even longer," said Keeling. "So to speed up implementa-

tion with R3, SAP reduced its flexibility."

The result is that users have to adapt their businesses to R3's way of working.

"You have to accept that you must map the organisation to the software, not vice versa," said David Lyons, chairman of the SAP user group and R3 project manager at Unilever.

Lyons believes the effort

**Knight 'It took us five days to export, reorganise and reimport the tables, which is unacceptable'**

is worth it, that the kind of business changes imposed are trivial, and that the real implementation issue is one of managing the business, not the system.

"One R3 user doing a multinational roll-out got bogged down for three months arguing whether to use the German word for piece instead of the English."

Knight said that because R3's database table structures were very sophisticated, implementers had to make the effort to understand them, "or your decisions may come back to haunt you later."

R3 therefore works best for companies with a stable structure, something that in this age of business re-engineering is not always possible.

Users may also encounter change-related problems when software is upgraded.

"That's our biggest problem. For example, moving from SAP release 2.1 required a new version of Oracle. It took us five days to export, reorganise and reimport the tables, which is unacceptable, even though we got more functionality," said Knight.

In the autumn, users have release 3 to look forward to.

Users are also finding that the goal of having a unified end-to-end software application covering all their activities is not easy to achieve.

"They are running into problems because of the complexity of integrating the modules, which is not straightforward, and needs tremendous detailed analysis," said Keeling. "This is often underestimated when

the software is purchased."

But if that is a problem for users, for the armies of consultants which resell R3, it is a bonanza. Nor should users forget that the sky-high salaries of £75,000 to £100,000 currently being paid for SAP expertise is ultimately met by them.

"The price of the software can be as little as 10% of the total cost," said Lyons.

Cynics would say that the very complexity of implementing R3 has been one of the reasons for its phenomenal take-up, encouraging the consultants to push it at every corporate user in order to collect on the huge consulting fees.

Some have even written their own vertical market modules, such as Andersen Consulting's for the oil and gas industry.

Ironically, however, it would seem that part of the problem with R3 is that its success has taken everyone by surprise, including SAP.

"SAP never realised R3 would take off so fast and was not aware of some of the complexities of implementing it," said Keeling.

Certainly the company came under considerable attack from users for failing to provide adequate support, a situation which they feel is

now much improved in the UK. SAP staff are now paid according to customer satisfaction. Users are surveyed monthly for their views, more staff have been hired and a hotline set up.

"Some of the support facilities may not be quite all in place, but the support culture is now established," confirmed Lyons. "At Unilever, I talk to my account manager three times a week, which is a considerable improvement compared with a year ago."

The question now facing SAP is whether users will move from a state of euphoria over R3 to disillusion, or whether the current wave of questioning represents growing awareness of the challenges that were there all along.

SAP certainly has a busy time ahead. Its rivals are now starting to snap at its heels. Traditional mainframe suppliers such as Dun & Bradstreet are finally getting going with their own client-server products, upstarts Baan and Peoplesoft are snapping up big name customers such as Boeing and Siemens, and a badly wounded Oracle Financials is determined to fight back hard.

"The honeymoon is over," said Keeling.



## SAP IMPLEMENTATION ISSUES

- LENGTH OF TIME TO IMPLEMENT TOO LONG
  - BUT 'FAST START' SERVICES
- TOO COMPLEX, TOO EXPENSIVE
- INFLEXIBLE, DIFFICULT TO CHANGE
- PROPRIETARY TOOL SET

INPUT

Notes:



SAP -

DO THE BUSINESS BENEFITS  
OUTWEIGH THE PAIN OF  
IMPLEMENTATION

HOW IMPORTANT ARE INDUSTRY/SECTOR ?  
SPECIFIC SOLUTION SKILLS

eg OIL, RETAIL, UTILITIES, BANKING,  
HOSPITAL, FINANCIAL ASSET MGMT etc.

INPUT

Notes:





## IMPLEMENTATION CHALLENGES

- LACK OF C/S INFRASTRUCTURE SKILLS

INPUT

Notes:



## Managed Operations

Three unmistakable trends can be seen in the marketplace that concern managed operations and SAP products. First, the general movement away from mainframes to client/server solutions based on UNIX and PC systems makes many customers anxious to out-source their R/2 mainframe environments, as a first phase to building a completely new IT infrastructure. Second, because of a lack of IT infrastructure and skills necessary for a client/server environment, many customers are kept from implementing R/3 unless a third-party provides the systems, networks, and resources. Third, general arguments in favor of out-sourcing, such as flexibility, rapidity, and cost, are also valid for SAP systems.

In order of importance and feasibility, these are the offerings or markets that IBM is addressing in the SAP environment with regard to managed operations:

- 1 R/2 facilities management
- 2 R/3 facilities management
- 3 R/2 to R/3 migration in a managed operations framework

## Availability Services

Availability Services is IBM's unit dedicated to all types of hardware and software maintenance. Today, these activities are being taken care of more and more remotely, often without the involvement of the customer IS department.

Both IBM and SAP consider maintenance and operational support key issues in any R/3 system and this is most evident in their partnership on Early Watch, SAP's remote and preventive diagnostic service. IBM and SAP are in continual discussions on how to improve all aspects of operational support and have expanded their joint efforts to cover the linkage of their respective helpdesks and development of new diagnostic tools for Early Watch that address network and systems management.

## Education & Training

IBM is a key partner with SAP in the strategy and development of SAP courses. IBM actively participates and provides support to SAP in its endeavor to enhance its R/3 training offerings. In return, SAP provides IBM with the necessary training material to teach SAP courses to customers and IBM internal units alike.



## SAP R/3 IMPLEMENTATION CHALLENGES

- ORGANISATIONAL IMPACT OF THE CHANGES
- VARIETY OF IMPLEMENTATION MODELS
  - CHALLENGE IS TO MINIMIZE INEVITABLE DISRUPTIONS

INPUT

Notes: *see IBM document — EXEC SUMMARY.*



## CRITICAL ~~SUCCESS~~ FACTORS FOR SUCCESSFUL SAP IMPLEMENTATION

- CHOOSING PARTNERS
- TRAINING
- TECHNOLOGY TRANSFER  
AGREEMENT

INPUT

### Notes:

- What are your desired characteristics  
in an implementation partner
  - wide or narrow industry experience
  - SAP experience level
- How do you ensure staff are trained  
adequately / effectively





SAP

# Users advised to think twice before R/3 move

David Bicknell

SAP could be a "violent mismatch" for companies without a compelling business reason to implement it, according to a report from Forrester Research published this week.

The report, called *SAP in Perspective*, claims SAP is too complex and expensive and should be purchased only if:

- a company's current systems are broken and it needs a comprehensive replacement immediately, or
- if a user's existing business processes need re-engineering

ing but will not change significantly in the next five years.

Russ Maney, director of Leadership Strategies reports at Forrester, said, "By 1999 the entire packaged application business will have changed. Many vendors will have improved their first-generation offerings while SAP will be shipping a new set of packaged applications that is only marginally compatible with R/3."

The report claims that a short-term R/3 commitment is an "oxymoron", as it takes more than two years to im-

plement and requires a high level of investment and expertise. R/3 is also described as inflexible when making changes to one part of the system and because of the proprietary toolset.

But Trevor Saloman, director of corporate communications for SAP, claims the average time for implementation of R/3 in the UK is less than a year. He said the report had failed to reflect the true views and experiences of SAP's users.

"All our customers have complex businesses, which does make implementing an

integrated set of solutions across the entire enterprise a challenging process," said Saloman. "But however painful it might be, at the end of the day the business benefits far outweigh the pain of implementation."

For those who do choose the SAP path, the report also discusses the critical factors required for a successful implementation of SAP, including choosing partners with wide industry and SAP experience, training staff effectively, and having a technology transfer agreement with partners.

## Tory MP admits to concerns over DSS IT strategy

Shan Kelly

CONSERVATIVE backbencher David Shaw has admitted that problems with the over-budget £3.35bn project to link computer systems at the Department of Social Security (DSS) may reflect an inability by central government to build its own IT systems.

Shaw, who was appointed to the Select Committee for Social Security in 1991, says he has been concerned about the DSS's Operational Strategy project for some time. He also said that his request for it to be evaluated by outside consultants at the last meeting of the select committee was rejected.

Speaking at the annual IBM Computer Users' Association conference in Brighton last week, he said, "We have a poor track record in building our own systems and I believe the solution may be to outsource development. Government should move

from being a provider to being a facilitator."

The DSS Operational Strategy began 12 years ago and was supposed to cost £713m. It was meant to link all social security payments into one transparent interface allowing all DSS staff to cross-check the different benefits paid to claimants. But the troubled project has already swallowed £2.6bn and is more than 250% over budget.

After *Computer Weekly* revealed last week that another £750m was needed to finish the system, and that it would not deliver the 20,000 job cuts initially promised, Labour called for an investigation.

"We need an explanation of how this project is slipping from one disaster to another," said Labour MP Alan Williams, a member of the Commons Public Accounts Committee, which expressed concerns about the DSS project in 1984 and again in 1989.



The group aims to develop secure electronic links across the capital

## A secure city-wide network for London

J. Green-Armytage

AN AMBITIOUS plan to create an open, but secure network for organisations in London will be launched next month by a powerful alliance of users, suppliers and collective organisations.

Geoff Doubleday, managing director of Inform

Leading City firms are backing the concept by joining the subscription-based partnership. These include BP, Barclays Bank, Lloyd's of London, Nomura, Smith & Williamson and UBS.

Suppliers AT&T, BT, ICL, Mercury Communications



## RANGE OF SAP SKILLS

- CONSULTANTS — BT CONSULTANT ?
- PROJECT MANAGERS
- ARCHITECTS
- SPECIALISTS
  - APPLICATION
  - DEVELOPMENT
  - INFRASTRUCTURE

INPUT

Notes:

BT = BUSINESS TRANSFORMATION...



# Press Information



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## REPORT BY LEADING SOFTWARE ANALYST RATES SAP'S R/3 AS "THE FUTURE OF COMPUTING IN THE 1990s"

**FELTHAM, December 4, 1993** - A report just published by leading independent software analyst Dennis Keeling has described SAP's R/3 client-server integrated applications software as "the future of computing in the 1990s". Mr Keeling, who regularly reviews application software packages, has given R/3 a rating of 74 out of a possible 100 points - the highest score he has ever awarded to any package.

Mr Keeling's report, *Profile Review*, praises the functionality of R/3 and says, "SAP R/3 exceeds all of the functional requirements of the profile specifications. It is the most significantly functional system that I have ever reviewed and sets the standard for all systems in the future." The report gives R/3 a score of 9/10 for functionality, which is the highest possible score: Mr Keeling never gives a score of 10/10 for any aspect of the assessment.

The R/3 System, which has been available in the UK since 1992, is designed to take advantage of open systems using client/server architecture, relational databases and graphical user interfaces. It offers a unique multi-level client/server concept, whereby database, application and presentation servers work together, via local and wide-area networks, to deliver processing power and data where users need them most. The R/3 System features a range of enterprise-wide applications, including financial, distribution, manufacturing and human resource management.

R/3 is intended to meet the needs of medium to large domestic and multinational organisations, supporting multiple languages and currencies. Mr Keeling's report highlights the benefits of the approach, saying it has "in-built flexibility in terms of departmental, national and international computing [that] sets the trend for large corporates to integrate their systems into a real time environment, across languages and countries from the start. SAP R/3 is designed for organisations which require the most sophisticated and flexible business accounting system available today."

-more-

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Mr Keeling's report says the systems financial applications "offer a wide range of flexibility and reporting functionality that puts it ahead of most client-server implementations at the moment. The reporting option for the balance sheet and profit and loss is one of the most powerful reporting tools that I have seen, yet allowing the simplest means of setting up, which would enable any user, with a few hours of training, to set up the most sophisticated of financial reports."

#### *Usability and Mainframe to Client-Server Migration*

The report also praises the ease with which users can change the look of their screens and reports, giving the system a score of 8/10 for usability. The report says that because R/3's design is parameter based, implementation time scales can be very quick - "as little as six weeks for a general ledger" - and the system does not require "significant IT skill to be able to implement changes."

The report also comments on the ability for users to migrate from SAP's market leading, mainframe-based R/2 system: "SAP R/2 and R/3 will come together as one single operating environment in 1995, enabling the client-server implementation to link to the mainframe as a database server, and at the same time offering R/2 mainframe clients the opportunity of using their existing data as the backbone to a new client-server option".

The summary grading given by the report, which is 35 pages long and was written following a two-day evaluation covering 1800 points of functionality, is as follows:

Usability	8	Character based implementation with drill down
Flexibility	9	Excellent user definable features
Functionality	9	Good levels of functionality throughout
Reporting	8	Good reporting facilities
Architecture	9	Multi-platform relational open systems
Range of modules	7	Full range being rolled out
Quality standards	3	Not BS5750 or BSI Kitemarked
Platform portability	7	Open Systems and proprietary
Stability of supplier	9	Strong international software house
Price	5	Reasonably priced open systems software
Overall	74	Leading international open systems software

-more-





Mr Keeling commented on the pricing of R/3: "I give most packages of this kind a score of 5. R/3 provides good value for money for the level of functionality it offers."

SAP has formed workgroups for the introduction of quality management systems, and concrete steps are already being taken towards an ISO 9000 / BS7550 registration. The first department is expected to receive registration by the end of 1993, with other development areas and subsidiaries following within the next two years. Mr Keeling explained that there are no software developers who have received the BSI Kitemark, so the maximum score he has ever awarded for quality is 5.

Commenting on the report, SAP UK marketing and business development manager Trevor Salomon said: "We are always pleased to receive independent assessments of our systems, and Dennis Keeling's report reinforces the view of the numerous worldwide R/3 clients that it is the leading integrated client/server system on the market today."

Dennis Keeling has worked as an independent business and accountancy software consultant for more than 10 years. Having developed his own assessment methodology, he has used it to evaluate more than 100 software packages worldwide. The results of these assessments are published regularly, and subscribers to his reports include consultancy firms, software houses and corporate organisations. He is a co-founder and director of the Business and Accountancy Software Developers Association (BASDA), representing the interests of 120 of the leading software developers including SAP.

Founded more than 20 years ago, SAP provides mainframe and client/server-based business applications software for a wide range of hardware platforms. More than 3,000 companies in 36 countries use SAP software for financial and cost accounting, manufacturing and logistics, sales and distribution and integrated human resources. SAP UK is based in Feltham, Middlesex, and is a subsidiary of SAP AG, headquartered in Walldorf, Germany. SAP employs a workforce of over 3,500 and has more than 28 subsidiaries and 24 regional offices worldwide.

- ends -



## News &amp; Background

**OVERWHELMING DEMAND FOR ZIP DRIVES MAY FORCE IOMEGA TO SIGN UP SECOND SOURCE SUBCONTRACTOR**

Power Computing Corp may have to wait a little while for its Zip drives from Iomega Corp, because the Roy, Utah-based drive maker says demand is so high it's having difficulty keeping up (CI No 2,680). The Zip drive, launched in April (CI No 2,652), has been a run-away success for the company but Srin Nageshwar, the company's European senior vice-president and general manager, said the marketing success was "a manufacturing nightmare." Demand for the \$200 drive has been 10 times what the company had expected and it won't have increased its manufacturing capacity to meet the demand until the end of the summer. Most of the drives will be made at the company's plant in Utah but Iomega is investigating the possibility of contract manufacturing - Xyratex Ltd, the former IBM UK Ltd plant in Havant should jump at the work. Iomega expects to ship more than 1m by the end of the year. Iomega has also launched its Travan tape drive products, the Ditto 800 and Ditto 3200. This leaves only Solon, Ohio-based Rexon Inc to announce a product that supports Minnesota Mining & Manufacturing Co's new tape technology. Travan has been designed to optimise the available space in a 3.5" drive form factor housing and are based on DC2000 minicardridge technology. They contain 750 feet of 0.315" tape, and pack considerably higher capacity. 3M has licensed the media technology only to Sony Corp, and has also just announced the TR-1, its 400Mb cartridge. Iomega's Ditto 800 stores 800Mb with compression, on one of these cartridges, has a data transfer rate of 500Kbps and is read-write compatible with 250Mb, 350Mb and 420Mb 3.5" cartridges, and read-compatible with QIC-40 and Irwin tapes. The Ditto 800 will eventually replace Iomega's Tape700 and Ditto 850 models, and the company expects it to become its best seller and entry level product. It sells for £150 or £230 for the parallel port version. The Ditto 3200 offers 3.2Gb of storage, with compression, and is read-write compatible with mini cartridges with capacities greater than 700Mb, but only read compatible with those below it and the 800Mb Travan tapes. Prices have not been officially announced but are likely to be £100 more for each drive type. Both drives come with back up software courtesy of Texan company Chilli Pepper Software Inc.

**CP SOFTWARE SHIPS RELEASE 5 OF ISLAND GRAPHICS**

Folsom, California-based CP Software Group is shipping release 5.0 of its Island Software Corp Write, Draw & Paint for Unix, which includes integration with the Island InText text retrieval system and IslandBuild application customisation tool when they become available in a couple of months. Version 5.0 is priced at \$1,000 under Sun Microsystems Inc Solaris, Hewlett-Packard Co HP-UX and IBM Corp AIX Unices.

**GEC PLESSEY HAS THREE ARM-DERIVED COMMUNICATIONS MICROCONTROLLERS**

Swindon, Wiltshire-based GEC Plessey Semiconductors Ltd has announced three 32-bit microcontrollers designed for high performance communications. The General Electric Co Plc company has designed the Butterfly, Spider and Mantis microcontrollers around the Advanced Risc Machines Ltd's ARM7 RISC core. The Butterfly is an entry-level product for cellular phones and data adaptors, and low-end Personal Communicators, and features two UARTs, a two-channel Direct Memory Access and 8-bit programmable peripheral interface designed for fast on-board communications. The Spider has the same basic design but includes an on-chip V21 PC Card slave interface. It has a four-channel Direct Memory Access controller with programmable source and destination devices, and one UART, and the company sees it being used in Asynchronous Transfer Mode PC cards. Mantis features a 16-bit programmable peripheral interface and a second UART interface and it is aimed at higher-end embedded systems that require a larger number of input-output ports such as a controller for bridges and routers. Butterfly can be clocked at up to 25MHz at 5V, 15MHz at 3V, Spider and Mantis do 30MHz or 20MHz at the same voltages. Butterfly is sampling now at \$17.50 for 25,000-up; Spider at \$23.50 and Mantis at \$32.00 will follow.

**QUALITY SOFTWARE FALLS IN LOVE WITH GRAPHICAL INTERFACES**

It's amazing the difference a decent graphical user interface makes. "It is beautiful," gushed Quality Software Products Plc's chairman Alan Mordain. He and his colleagues believe that with the new release 4.3 of Universal OLAS, or on-line accounting system, they have got a truly open one, and thus a real competitor to SAP AG's R/3 system. Taking what he dubbed the "three-tier client-server" model as the ideal, the Gateshead, Tyne & Wear company has now achieved the triumvirate of success at the data, logic and presentation layers, according to Mordain. Quality has moved in the space of 18 months from what he called "a non-intuitive GUI" to a shiny new all-singing, all-dancing version, using Dynamic Data Exchange to enable users to import data into any widely-used spreadsheet or word processor running under Microsoft Corp's Windows. But at all times, security profiles of users are maintained, whether they are working in an OLAS module, or in a spreadsheet, for instance. Behind the front end, the changes have been equally, if not more, significant. Workflow and document imaging are greatly enhanced with the new version, according to the company. Documents can be captured, stored and indexed with optical character recognition, ready to be called and used by any other part of the OLAS system. A workflow product from Wang Laboratories Inc has been integrated into OLAS, enabling the automation of more mundane tasks, such as completing an invoice. Wang Workflow takes the relevant information from wherever the user happens to be in OLAS and fills in the invoice, which could be in a separate module, hitherto unexecuted by the user. Universal OLAS can also be linked to external workflow products. Another use for workflow can be seen in the new business event manager module, said the company. This is part of the wider procurement management process and can recognise pre-defined events - which can also be customised - and update the user's diary, or any other action that is required, such as the authorisation of an order. The other new module added to the procurement management software is buyer decision support. It was written using Lotus Development Corp's Notes and includes a Notes engine for issuing and receiving documents in a variety of formats, and covers the entire purchasing process from specification of requirements through to the completion of the contract. The purchase order processing, commitment accounting and accounts payable modules have been enhanced and integrated with the new ones, according to the company. Universal OLAS 4.3 is available now for IBM Corp mainframes under MVS; RS/6000s running AIX; Sequent Computer Systems Corp Symmetry machines under DmX/ETX and Hewlett-Packard Co's HP 9000 Series 800 running HP-UX. A Windows NT version is now in beta test.



## DEC REORG NUMBER....

For some time now, DEC people have been telling one another by way of commiserating, "If you don't like the current organization, wait five months: it'll change." Well, last week they did it again although this time it's not as sweeping as the last time or even the time before that. As a result, the NT P&L unit *finally* has a chief. DEC veteran Lucia Quinn, who reportedly had a lot to do with seeing that there was an NT P&L unit in the first place, has been named vice president of the Windows NT segment. Jesse Lipcon, the long-time DECic regarded in some circles as the father of the MicroVAX and head of DEC's nascent NT efforts some reorganizations back – some say because he's the one who actually did the NT deal for DEC – has now been named VP of the entire Alpha systems business under the Systems Business Unit run by Enrico Pesatori. Lipcon had been off doing VMS sorts of things until this latest move. Unrelated to the reorg, the Systems Business Unit has also just lost the services of VP, product strategy Willie Shih, the ex-IRMer who was escorted to the door when he told DEC he was pushing out to Silicon Graphics next month. Shih, who went in about 18 months ago as VP, Alpha Personal Systems, was also responsible lately for alliances. Apparently his job will be divvied up and there'll be no direct replacement for him. Insiders size up Quinn as being well-connected inside DEC where as a business planner she reported directly to CEO Rob Palmer. They think she has the clout to drive the NT effort especially in tandem with Lipcon whom they still perceive as a strong NT backer. DEC also just strengthened the sales and marketing side of the Systems Business Unit by, among other things, importing Mike Gallup from HP as VP, worldwide systems marketing (CSN No 86). Reports indicate things have turned highly political inside DEC and claim that everything's in flux and there's a lot of thrashing about. It remains to be seen whether these new appointments put a lid on a lot of that stuff.

## SAP BREAKS BILLION DOLLAR BARRIER

SAP is now a billion dollar company and for the first time it's getting the bulk of its revenues from outside its domestic market in Germany. Its growth market is unequivocally North America where its business was up 157% in 1994 to \$367 million, mostly thanks to R/3, the client/server version of its integrated business management software, which it credits with producing 87% of the company's total sales. R/3 licenses were up 441% while its predecessor R/2 dropped by 50%. SAP earned about \$186 million, up 92%, on revenues of roughly \$1.21 billion, up 66% with 64% of its business coming from outside Germany. Product sales account for \$805 million and consulting and training \$305 million. It now employs some 5,044 people worldwide, up a thousand. In the US it employs 869. The company figures it did about \$265k a head last year. Meanwhile, Data General has gotten SAP-certified for R/3-on-NT on its Dasher line of Pentium NT servers, as anticipated (CSN No 71). DG claims to have a special three-tiered implementation. Its standard Unix-based AViiOn database servers support R/3 apps in an NT environment, reportedly a first. DG calculates that this R/3 implementation costs about 25% less than a total Unix-based alternative. DG has begun shipping systems and has early sites in California, Belgium and the UK, the last at Texaco Ltd.



Western Wares of Norwood, Colorado is upgrading its CC-Rider Deluxe Edition 5.1 to work with Windows NT. CC-Rider is a toolset for analysing C and C++ source code and creating documentation. The new version, which the company calls a complete standalone environment, includes a visual source code browser that graphically displays such things as class hierarchy, ancestry, nesting trees, function call and caller trees, and header file nesting trees. The NT kit is \$400.

## COLLABRA UPGRADES, CAN SHARE LOTUS NOTES & INTERNET

Collabra Software has released a new generation of its Collabra Share information sharing and group conferencing software, adding features for team use and agents to link Share 2.0 to Internet Newsgroups and Lotus Notes databases. Share 2.0 includes what the company calls bookmarks, quicklinks and quickviews plus read later and ignore options for e-mail. A newly designed InfoNavigator is supposed to help users sift through large volumes of data quickly. Also new to Share 2.0 is a thread summary. Collabra is offering two versions of Share 2.0. One is a client/server edition that runs only on NT Server and is aimed at wide-area enterprise deployment and the other is a simpler file sharing version. The Collabra Share Server for NT is \$995 plus the cost of agents for the client systems on the network. Agent pricing per 100 users is \$995 for either the Internet Newsgroup agent or Share Mail Agent. The Share Replicator Agent is \$495 and the Share Agent for Lotus Notes is \$1,995. Upgrades are \$30 per user for the file-sharing version and \$50 for the client/server version.

## PROCESS HAS NT WWW SERVER

Process Software Corporation of Farmington, Massachusetts will begin shipping a World Wide Web server in March for Windows NT and future Win32 platforms. Purveyor 1.0 features point-and-click security access control fully integrated with Windows NT File Manager and full logging and report facilities. It includes a Windows look-and-feel GUI and support for both HTTP and HTML, so it can handle browsers like Mosaic. It runs initially on Intel and Alpha boxes under NT 3.5. Licenses will go for \$1,995.

## HUMMINGBIRD UPDATES NT PC X SERVER

Hummingbird Communications Ltd is shipping an updated X11R6-compliant server called eXceed 4 for Windows NT that lets NT users on Intel, Alpha and MIPS platforms access Unix, VMS and X Windows environments. Hummingbird says it's the first NT-based PC X server to include a scripting language and remote access, via telephone lines, to Unix and X-based applications. The scripting language, eXceed Basic, combines NT-based X Window system libraries with Basic to let users develop local X clients with an NT look-and-feel, including an FTP client with an intuitive GUI, toolbar support, drag-and-drop file transfer, local printing and connection to Internet FTP services. The Canadian company is using the same eXceed/Xpress module contained in its eXpress 4 for Windows. The module uses telephone lines and Tektronix' Serial Xpress Protocol to access remote Unix, VMS and X Window-based computers. The server is priced at \$545.

## SGI BUYS UP SOFTIMAGE RIVAL

Silicon Graphics last week announced that it will trade close to hefty \$472 million in stock to buy up two 3D special effects and industrial design tools ISVs: Toronto's Alias Research Inc. and San Jose, California's Wavefront Technologies Inc. SGI is planning to combine them in a single wholly owned Toronto subsidiary worth now about \$56 million-a-year in revenues, mostly from Alias, a rival of Canadian neighbor Softimage which Microsoft bought last year. The *Wall Street Journal* quoted a customer of both Alias and Softimage as saying the deal makes SGI look like a "rabid dog lunging for Microsoft's jugular." SGI denies it will now be competing with its own ISVs. Alias chief Rob Burgess will be president of the new unit.





## CHEYENNE'S ARCSERVE FOR NT ARRIVES

Cheyenne Software has released the long-awaited NT version of its ARCServe backup and restore software. ARCServe for Windows NT is functionally equivalent to Cheyenne's ARCServe for NetWare, a dominant player in its market niche. Cheyenne released an agent that lets NT systems be clients to a NetWare network with ARCServe on it last August (CSN No 57). The server is the key piece, though, and has been in beta for months now. Cheyenne hoped to have it ready at Christmas (CSN No 75), a target it missed. It rewrote ARCServe rather than port it. Instead of implementing ARCServe as an application, Cheyenne has written it as an operating system service, a key architectural difference that allows LAN administrators to schedule and perform system-wide backups regardless of user log-in and turns over actual control of the backup job to NT itself. ARCServe for NT is also written to exploit NT's multitasking and multithreading. It also has parallel streaming, which eliminates the need to launch duplicate programs to backup multiple tape drives concurrently. Cheyenne says it can support up to 32 drives at one time. ARCServe for NT initially supports Intel platforms only. Cheyenne is promising RISC support, but says the timing of those releases will be based on market demand. Likewise, it's promising add-on database agents later this year for Oracle and SQL Server, with others also based on demand. ARCServe for NT is \$895. An add-on module to support autochangers for unattended file systems backup is another \$595. Cheyenne last week also confirmed reports that it is developing native NT versions of its InnouLAN anti-virus software (CSN No 75) and its NLM-based FAXserve facsimile product (CSN No 83). Finally, the Roslyn, Long Island company has created a separate marketing unit to handle its emerging NT line. It's plucked Mary Fenton-Lee from Arcada Software Inc where she was the product line manager and business unit director responsible for the backup utility that Microsoft licensed to put in NT. At Cheyenne she becomes product line manager for NT products.

## COMDEX SOLD TO JAPANESE FOR \$800 MILLION CASH

Comdex and its recent offshoot Windows World, phenomena whose destiny has been so intertwined with Microsoft, the PC and greed, has been sold to a Japanese company for \$800 million cash. The Japanese company, Softbank Corporation, is acquiring all of the Interface Group's trade show business, some 17 computer-related shows in all. It also recently bought the Ziff Communication show business which includes Network-Interop and Windows Solutions for \$202 million. Softbank, a \$640 million-a-year public company, touts itself as being Japan's largest software and peripherals distributor, its largest publisher of computer-related books and magazines and its largest distributor of network products. The Interface shows will continue to operate under their current management including Interface president Jason Chudnoffsky. However, Comdex founder and huckster-in-chief Sheldon Adelson, after a run of 16 years, is moving on to other things. Adelson, who's caught flak lately as a "gouger," owns 51% of the Interface Group, according to the *Wall Street Journal*. Reported profits from a single Comdex show have been claimed to run as high as \$90 million and some major vendors were threatening during the last Fall Comdex show to create a counterComdex show just to lower costs. Adelson will continue to own the Sands Hotel in Vegas and the Sands convention center that he built to house Comdex overflow. After the deal closes sometime in mid April, the old Interface trade show unit will be renamed SB Comdex.

## ANDERSEN CONSULTING LATCHES ON TO SAP'S COATTAILS

Harkening to the fact that SAP's business in North America was up 157% last year and that the bulk of revenues are now coming from outside its native German marketplace (CSN No 87), Andersen Consulting aims to deal itself into the SAP hot streak. For the first time ever in support of a third-party item, it says, it is setting up a formal P&L organization, the SAP Business Organization, in support of R/3 under partner-in-charge Karl Newkirk. Newkirk attributes the change in policy to SAP's degree of penetration in large companies, a phenomenon that practically happened overnight, he said, attributing a lot of it to the way R/3 spans all major business functions and the fact that SAP was there first with a client/server solution. Initially at least the Andersen unit's activities will be restricted to North America where it intends to add another 1,000 R/3-savvy consultants by the end of the year. This does not mean that SAP will hire a crop of new staffers — merely that it will train a 1,000 of those currently on its roster which worldwide is something like 29,000 people. It currently has 500 SAP-fluent folks in North America and the newcomers will raise the full complement to 1,500. Worldwide it already has 2,000 total. Andersen will house consultants in a series of Solutions Centers it sets up across the US, beginning with one already opened in Cincinnati, to support those it deploys at customer sites. Andersen has also isolated six vertical markets it intends to exploit with R/3 and established centers to house its industry-specific skills. They include: oil and gas (Houston), electronics (Forster City, California), process/chemicals (Cincinnati) and consumer packaged goods (Chicago). Pharmaceuticals and utilities will be added later. Andersen also touts its people as having skill sets that encompass strategic planning, change management and logistics. Andersen is currently involved in some 50-60 R/3 implementations in North America and Newkirk figures the number will be 100-150 by the end of the year. Currently he said, the majority are Unix-based but he is watching how the NT market develops and expects it to rise. He expects his P&L to account for some \$150 million-\$200 million in revenues this year.

## EXCELERATOR TO RUN ON NT

Intersolv, a client/server tool maker, has put NT and Warp support in its object-oriented analysis and design tool, Excelsior II. Version 3 also features an interface to PowerBuilder to create documentation. Microsoft Word, Wordperfect and Lotus Ami Pro during rapid application development (RAD). With its Pblink interface, users can build RAD designs with a full PowerBuilder application. Excelsior is designed to work with a suite of existing Intersolv applications: PVCS for managing software configurations, APS for Client/Server generating applications automatically and Q+E for querying against the Intersolv LAN Repository, which can be hosted on IBM DB/2, Microsoft SQL Server and NT SQL Server, Sybase SQL Server and System 10 and Informix. Excelsior supports various object-oriented methodologies, including OMT, Jacobson, Martin/Odell and Wirz-Brock, while also supporting the traditional Information Engineering Structured Methodology and SSADM so users can move from where they're used to to object-oriented approaches. A Workflow Manager eases the transition from different methodologies or can be edited to accommodate customized methodologies. An enhancement called SuperView creates ANSI-standard C++ class library definitions and function stubs and provides a framework so developers can move object-oriented code with a C++ compiler. The Rockville, Maryland company is pricing the new software at \$4,000.





## News &amp; Background

**SUNSOFT LAUNCHES SPRING AS OBJECT-ORIENTED VEHICLE FOR EXPLORING OPERATING SYSTEM TECHNOLOGIES...**

The SunSoft Inc software arm of Sun Microsystems Inc has lifted more of the veil on its object-oriented Spring technology, which it describes as a "concept car" for experimenting with future operating system technology. Spring components feed into SunSoft's Distributed Objects Everywhere environment and Solaris. The new Spring Research Distribution release is being made available for Sparc systems at universities and research departments worldwide and consists of an object-oriented microkernel, distributed objects, distributed directory services, security, symmetric multiprocessing support, multi-threading and a development environment that uses and creates reusable object components. Spring is Sun Labs' baby and engineers there already use the technology as their day-to-day desktop and development environment. Sun's Moscow Centre for Sparc Technology has been using Spring for development and testing for a year. SunSoft will add Spring's networked object environment; Interface Definition Language for defining network objects; directory services to locate and manage objects over a network; security and access control for objects; and fast IPC interprocess communication to Distributed Objects Everywhere. Spring comes on CD-ROM with all binaries, Interface Definition Language files, key source examples and teaching material, plus a Spring-specific version of the Workshop for C++ development environment, priced at \$75 for universities and \$750 for commercial organisations. There is more Spring to come in, well, the Spring, says Sun, meaning April.

**...OFFERS ITS CORBA 2 INTER-OBJECT PROTOCOL CODE FREE; OBJECT REQUEST BROKER WILL GO TO BETA TEST IN MAY**

SunSoft Inc has a 10,000-line C++ source code implementation of the Inter-Object Request Broker Protocol - IOP - for connecting different object request broker implementations, and is offering the thing free of charge from the Object Management Group's Web site. Inter-Object Request Broker Protocol is part of the Object Group's CORBA 2.0 Universal Network Object specification, developed by Sun Microsystems Inc and others, with which Expert Corp has already been playing. Sun has compiled the code using Sparcworks for Sparc, Proworks for x86, Borland C++, GNU C++ and Visual C++, and is confident that it will run under most operating systems. It is not providing executables. The C++ code is in four parts: a common data representation engine; a type-code interpreter to manipulate data types; the Internet IOP Engine with a partial Object Request Broker implementation; and Internet Inter-Object Request Broker Protocol-specific modules that send, receive and despatch Internet Inter-Object Request Broker Protocol messages. SunSoft says the partial Object Request Broker Architecture implementation is not intended to hook users on to its object broker, rather they are the pieces required to use Inter-Object Request Broker Protocol for development where such an object broker may not exist. Users will still require a bridge mechanism to get out from an object request broker to Inter-Object Request Broker Protocol and across to other brokers for Universal Network Object compatibility. Sun's own, currently nameless, object request broker goes to beta test in May as a CORBA 1.2 affair. It will not include the Universal Network Object bridge that SunSoft is still working on, nor will it contain the object request broker-to-Microsoft Corp Object Linking & Embedding bridge it is getting from its investment in Iona Technologies Ltd. The object request broker goes on general release in the autumn, at the same time as a full OpenStep implementation goes to beta test. SunSoft says it has not decided whether the CORBA 2-mandated Universal Network Object bridge will feature in the first general delivery of the object request broker, but is more confident about the object request broker-to-Object Linking & Embedding bridge it says customers want now.

**WIND RIVER PLANS VxWORKS UPGRADE TO INCLUDE POSIX SUPPORT**

Alameda, California-based Wind River Systems Inc has upgraded VxWorks, its real-time embedded operating system with implementations for the Motorola Inc 68060, 68LC040, and 68EC040, plus support for Posix 1003.1b real-time extensions and TCP/IP enhancements. VxWorks 5.2 is up on 68000, CPU32, 80960, iAPX-86, Am29000, Sparc, R-series and its own VxSim simulation environment. Full VxWorks support for PowerPC 601, 603, 604 processors and the 403GA embedded controller is promised for April. Precision Architecture in the second quarter and Hitachi Ltd SH7600 in the third quarter. WindView 1.0.1, its diagnostic and analysis tools, will be available for 68000, CPU32, 80960, iAPX-86, Am29000, Sparc, R-series, PowerPC and VxSim next quarter.

**LATEST R/3 RELEASE A MAJOR LEAP FORWARD FROM RELEASE 2.2 SAYS SAP**

Release 3.0 of SAP AG's R/3 system has "won the battle and the war on the marketplace for increased functionality", according to SAP North America chief executive Klaus Besier. "It takes us a giant step forward from Release 2.2," Besier said. Because the system's logical capabilities have been extended, the package now supports all types of production, Besier noted. SAP also introduced PP-PI, a production planning and control system specially designed for the process industry. It can be fully integrated into other higher-level systems as well as process control systems and laboratory information systems. SAP also used CeBIT to present an integration scenario with its new Application Link Enabling concept. Application Link Enabling enables communication between separate application systems and thereby enables companies to uncouple their application systems so they may be used locally and independently, SAP says. Following what Besier said was the successful launch of R/3 on the Windows NT, the company announced that there will soon be a Microsoft Corp database available for use with R/3. The implementation of the SQL Server 6.0 by Microsoft in SAP's R/3 is the result of a long co-operation. Benchmark tests to measure the performance of the combination are planned for the second quarter of 1995. To date more than 260 R/3 systems have been installed on iAPX-86-based Windows NT systems since R/3 was released on Windows NT in April last year.



SAP

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# SAP's star-spangled success

German software specialist SAP has been criticised in the UK because of the lack of support it provides users of its Unix-based financial products. Yet in the US the company seems unable to do anything wrong. **Kate Button** talks to SAP America's head Klaus Besier

**W**hat does Klaus Besier believe is responsible for SAP AG's gargantuan success? "Good old German engineering!"

Of course, Besier is a little biased. He is chief executive of the client/server business applications manufacturer's largest subsidiary - SAP America - and he is German.

But since SAP AG just reported its 1994 figures, in which sales grew at a rate of 166% to an all-time high of \$1.1bn and net profit almost doubled to \$173.5m, Besier has a perfect right to be just a bit boastful.

Good old German engineering, however, is only half the story. In 1988, SAP management, based in Walldorf, Germany, recognised the potential of the client/server market and began a project to create the next generation of software products. It was entitled the R3 product line.

Having built the firm's fortunes on the back of the R2 family of mainframe applications, the management saw such a switch in emphasis

about the integrity of translation within the product.

When asked if SAP suffers from premature ejaculation (in that it gets products too quickly, lacking adequate preparation to eliminate bugs and faults), Besier's professional pride is hurt.

"I disagree with that statement!" he smarts. "It may be true that we suffered from that a little in the early release of R3, but our testing these days is much stiffer."

Besier believes such criticism is the direct result of the market's impatience and the product's perceived high value. Apparently, pilot and beta customers, having tested the R3 product in the regular quality assurance procedure, often request a pre-release version for immediate installation, regardless of possible faults in the software. "The problem is everyone wants it immediately - they know how good it is," says Besier.

Despite clients' poor recall, SAP has nevertheless made certain changes in its test programme to counter claims of imperfections in its

product from the start, because then we spend less on hot-line services and after sales support. Our pre-sales consultants know that if they skip a problem in the testing process, they'll only have to face it later on - along with a furious customer!"

Another shadow cast by the brilliance of SAP's per-

formance poses a moral question about a software vendor's responsibility to provide the necessary skills in the market to support their product.

The US computer press has carried many stories in which SAP is scolded for failing to ensure that its clients can employ R3 experience at

a reasonable price. According to one trade rag, "a typical salary for a person experienced in configuring an R3 system runs from \$90,000 to \$100,000."

Besier refutes this, saying that while there are few individuals with R3 experience sitting around twiddling their thumbs, "you can ask around

and you won't find too many making that kind of salary either."

Although a possible skill shortage in a specific product line is not necessarily the direct responsibility of the software manufacturer, the inflated expense of implementing an R3 system, owing to the cost of finding, hiring and



## THE UNISYS



Germany, recognised the potential of the client/server market and began a project to create the next generation of software products. It was entitled the R3 product line.

Having built the firm's fortunes on the back of the R2 family of mainframe applications, the management saw such a switch in emphasis as highly risky – a “make or break” strategy.

But industry foresight paid off and in 1992 R3 was launched. After initial teething problems, it outpaced the waning sales performance of mainframe applications.

“We came out with the right product at the right time,” says Besier, “and now we are number one in client/server by a very large margin. Our applications revenues are a multiple of our closest competitor’s.”

That multiple appears to be growing. According to IDC's 1994 estimates, SAP AG holds 8.1% of the \$5.96bn client/server applications market (licensing and maintenance fees only) compared with Oracle – a distant second with a diminutive 2.5%.

Peoplesoft (1.8%), Computer Associates (1.5%) and TMRS (0.8%...) while all growing in client/server application sales, are still insignificant players. “In truth, we have no competitor,” crows Besier.

But every silver lining has its cloud, and SAP has suffered its fair share of criticism. Such dynamic growth can engender shoddy quality and inadequate support systems. The R3 release was a classic example, in that primary users raised questions

which request a pre-release version for immediate installation, regardless of possible faults in the software. “The problem is everyone wants it immediately – they know how good it is,” says Besier.

Despite clients' poor recall, SAP has nevertheless made certain changes in its test programme to counter claims of imperfections in its software. The 3.0 release of R3 is presently in quality assurance testing where, among other things, 30 individuals probe the product for American language and documentation specifics for more than six weeks.

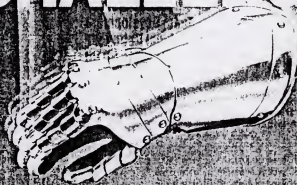
Once the beta and pilot runs are completed, the finished product will be shipped this autumn. Meanwhile, SAP maintains one of the

**BESIER: ‘In truth we have no competitor... the more successful you are, the more they want your solution. It just snowballs!’**

highest research and development investment rates in the software industry, with 25% of revenues being ploughed back into the development and testing of new products.

Besier says, “Despite what our critics might say, there is far greater benefit to us to put out a high quality

# THE UNISYS BUSINESS CHALLENGE



RETURN TO





# Report highlights costs of moving to SAP's R/3

David Bicknell

A REPORT from a US research group has advised users to treat a move to SAP's R/3 manufacturing and finance package with caution and recommends the use of a pilot system with payment based on performance.

The report, by the Billerica, Massachusetts-based Plant-Wide Research Group, also claims that a "cottage industry" comprising accounting firms and hardware companies has built up around R/3, which it describes as "a mimic of R/2, built on a proprietary fourth generation language, and not really open".

It goes on to say that SAP's MRP-II-based land-

scape is "attractive to a large number of third parties" and is the "perfect environment for the Big Five accounting firms".

It suggests the alliance between SAP and consultants is not always favourable for end-users.

According to Plant-Wide it is not at all unusual for a Big Five customer to spend up to a £1m in consultancy fees over and above the cost of an R/2 or R/3 MRP-II system.

Plant-Wide also says a number of companies are running into problems with R/3, and that there are compatibility problems with Digital Equipment's OpenVMS operating system.

The report claims that R/3 applications function as if they are in a centralised main-frame environment, and that modification or enhancement is complex, costly and risky. It concludes by saying R/3 is "difficult to implement, main-frame-centric, and lacks the rich functionality claimed by third parties".

Iain Barker, managing director of Birmingham consultancy 121 Consulting, countered the report's findings by saying that users would be unconcerned whether a product was "open" if it gave them a competitive advantage by improving customer service levels. He added that the relationship between SAP and

its consultancies was not as close as the report suggested. "Consultancies' business cannot live and die with SAP, but the success of SAP does mean it is an enabler to sell other business services."

SAP marketing and business development manager Trevor Solomon said SAP was facing criticism because the company had taken risks "like Microsoft" and had gained an edge on the competition. He added that SAP was not a cottage industry for consultants and claimed that there were "Chinese walls" between the consultants involved in product choice for users and those implementing the systems.

See Letters, page 29

## Misys faces user revolt over cost of upgrade

Phillip Inman

FINANCIAL systems group Misys is facing a revolt from users of its insurance broker systems after the company indicated that future releases of its software needed major hardware upgrades.

Many users have been told that, after paying around £10,000 for their existing systems, they will have to pay a similar amount to upgrade them.

Howard Horne, managing director of independent financial adviser Howard Horne Associates, said, "We would move away from Misys like a shot because we don't want to have a proprietary supplier anymore."

Horne was told last year he will need to pay nearly £10,000 to upgrade his life and pensions system Libra.

Now general insurance brokers are being quoted similar figures to upgrade



While most users are buying smaller systems Jaguar Cars is continuing to double its processing capacity every 18 months. Now it has installed a Convex supercomputer at its

Coventry engineering centre to predict how its new cars crumple in crashes. Convex won the order against IBM, Cray Research and Silicon Graphics.

## Lotus responds to Microsoft challenge with price cuts

Charles Walker

LOTUS users meeting in Brighton this week have wel-

comed Lotus' announcement of a stripped-down version last month called Desktop, allow-

ing users to buy a version of the software at a price that is more competitive than the price of other spreadsheet

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# All change for rail systems

**Julia Vowler** finds out how BR's IT managers are facing up to the challenge of adapting systems 'or the privatised network

Computer managers and staff must try to turn political ideology into some semblance of a workable national railway system as transport secretary Brian Mawhinney sets about privatising British Rail (BR).

Already BR's privatisation has led to the railways being divided into different business operations.

Although BR's £100m-a-year IT division, Business

Systems, is just one among many of the operating units, the railways are critically dependent on IT. If the computers go down, the trains stop running - whoever owns them.

The schedule for privatisation is already running late. But Business Systems is preparing for the changeover.

Last month a new IT chief was appointed. Peter Cook arrived following 20 years at Digital Equipment. In the



The railways are critically dependent on IT - if the computers go down, the trains stop running

eyes of BR, Cook has two main virtues. Not only did his role as European-wide in-house IT supremo afford him the experience to run a huge IT division, but Cook was also responsible for Digital's computer services businesses, giving him valuable experience

as a supplier as well as a user of IT. This puts him in a good position to run Business Systems both as a large corporate IT delivery organisation and as a commercial business in its own right.

"Peter's priorities are to establish a firm rapport with all his principal customers, identify their key needs, both current and future, and mould a business plan which will take us through privatisation," says Cook's boss, managing director of BR's Central Services, Tony Roach.

To ease the transition, Business Systems, like all the other BR businesses, will be allowed to continue its current contracts for at least a year. After that, as Cook acknowledges, he's on his own, and has to win all his business.

Business Systems has already lost one major contract. Last year, Andersen Consulting

However, far more development is on the cards now as Business Systems moves to become a commercial supplier, business which Cook intends to pick up. The newly privatised BR businesses will need to invest in new IT, argues Cook, in order to differentiate their performance in the newly competitive environment.

Moreover, Cook believes that mainstream commercial IT suppliers lack the experience of providing railway-oriented IT systems, giving Business Systems its own competitive edge in its new marketplace.

"Not many IT companies outside BR know much about railway IT systems," he says. Cook also believes that Business Systems can sell IT to other countries' railways and other transport sectors, such as buses.

Some of the existing core systems may also be safe in that privatisation will move them into the hands of

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NETWORK SERVER		Expert Assistance Training	Remote Fault Resolution Extended Remedial Action -on site -workshop	Management of: Faults Configuration Performance Accounting & Inventory Security & Contingency	Systems Analysis Configuration Specification Systems Selection Development Implementation
NETWORK		Expert Assistance Training	Remote Fault Resolution Extended Remedial Action -on site -workshop	Management of: Faults Configuration Performance Accounting & Inventory Security & Contingency	Systems Analysis Configuration Specification Systems Selection Development Implementation



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all the other BR businesses, will be allowed to continue its current contracts for at least a year. After that, as Cook acknowledges, he's on his own, and has to win all his business.

Business Systems has already lost one major contract. Last year, Andersen Consulting won the right to implement the new SAP R3-based financial systems which will consolidate accounts across the new franchises, although the deal was finalised before Cook's arrival.

Will the Andersen contract just be the first of many to gnaw away at the Business Systems contracts portfolio? One danger facing Cook is that a privatised IT department, having sown the seed of dissatisfaction among its customers when they were captive users, may discover its users defecting to other suppliers once they are free to buy IT elsewhere.

How good was Business Systems' reputation among its users during its 32-year history?

"That rather depends on who you talk to," says Roach. "Inevitably, we have got a situation where the IT department has been around a long time. Some of the mainframe systems are long in the tooth now, and, in terms of computer asset management, may not be optimum."

Mission-critical applications, because they are so dedicated to their core function, can appear to end-users as inflexible, unresponsive and unfriendly, admits Roach. "We've spent a lot of time developing friendly, PC-based systems to counter this reputation," he adds.

about railway IT systems," he says. Cook also believes that Business Systems can sell IT to other countries' railways and other transport sectors, such as buses.

Some of the existing core systems may also be safe in that privatisation will mean they are even more important, albeit that they may need modification.



MAWHINNEY... Privatising

A prime example is Capri, the system which splits up the price of a cross-country railway ticket between the different rail franchisees on whose trains the passenger travels to complete his journey. Currently, the allocation of revenues is an internal accounting matter only. After privatisation, it will be for real, and Cook envisages Capri evolving into a neutral clearing system much as the banks use.

If Cook can succeed in winning the lion's share of IT orders in a newly privatised BR, then he may live to see Business Systems survive as an independent commercial activity. If not, it may itself be dismembered and sold off in pieces, just like its parent organisation.

See *Newsmaker*, page 128



SAP is a successful worldwide applications software supplier. Its products are designed to integrate information throughout organisations, from large multinationals to growing companies, in open computing environments.

Recent reports by leading international analysts IDC and the Gartner Group have shown SAP's R/3 to be the world market leader in client/server business applications software, and SAP UK won the 1994 X/Open Open Software Supplier of the Year Award.

SAP UK is a wholly-owned subsidiary of SAP AG, the world's sixth largest software company, which was founded in 1972. The company has 28 subsidiaries and 21 regional offices worldwide and more than 5,500 employees. SAP UK has over 130 employees, more than 60% of whom are in customer support.

SAP provides a customer support programme to assist its software users in all areas of pre and post-sales support, including technical and applications consultancy, software upgrade installation, education and training.

In addition, SAP has formed strategic alliances with business partners to offer clients a choice of consultancy and implementation services. These partners include Andersen Consulting,

Coopers & Lybrand, KPMG, Origin and Plaut.

SAP also has close relationships with key hardware and technology partners, and has established international Competence Centres at its headquarters in Walldorf where SAP and its partners share engineering, sales and support expertise. SAP's hardware partners include HP, IBM, Digital, Sun and Compaq.

SAP's Sales and Distribution System is available as a module of both the R/3 client/server system and the R/2 mainframe system, and embodies SAP's principles of workflow management which are based on business processes.

The product supports not only the range of activities involved in sales, shipping and billing but is also directly integrated with SAP's materials management production, financial accounting and human resource modules to provide integrated business applications.

The Sales and Distribution System covers the sales cycle. In the sales phase, the system has capabilities for processing and monitoring enquiries, quotations and sales orders as well as outline agreements; it also delivers a solution for the inevitable occasions when complaints need to be handled. Prices, surcharges, discount and taxes are

COMPANY	
Turnover (UK)	£22.9m
Turnover (World)	\$1.1bn
Profit Before Tax (UK)	N/A
Profit Before Tax (World)	\$291.4m
Number of Employees (UK)	130
Number of Employees (World)	5,500+
Software Marketed (UK)	Direct
Hardware Marketed (UK)	N/A
End User Support Provided By	Direct
End User Training Provided By	Direct
User Group	Yes

automatically determined in local and foreign currency, with a checking facility on customers' credit status.

Although the most common sales transaction are pre-defined in the standard application, they can be modified or added to using SAP customising tool.

The software is designed to streamline the distribution process; for example, it "understands" that the shipping function is an integral part of the sales process which means that all data necessary for a delivery can be derived from the sales order. It also undertakes deadline monitoring of orders due for delivery, creating lists

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Trevor Salomon

**User Group Chairman**  
David Lyons,  
Unilever International

**Telephone number**  
0117 927 6276

for shipping points and automatic route determination for each item.

Following the creation of deliveries, the picking location of a delivery item can also be determined automatically, taking into account relevant shipping and storage factors. The goods issue completes the delivery cycle with the system updating stock levels and values in financial accounting at the same time.

Billing completes the capabilities of SAP's Sales and Distribution System. The integration of sales and shipping with billing means that the creation of billing documentation takes place with minimal effort.

SAP's software is currently in use in more than 4,500 organisations worldwide including many Times 100 and Fortune 500 companies, such as Texaco, ICL, Pilkington, Grand Metropolitan, Unilever, Sharp Electronics UK, Cadbury, Roche and Zeneca.

SAP says its software is used in virtually every commercial sector, and it offers specialist sales and support expertise, in conjunction with its partners, for a range of sectors, including oil and chemicals, food and drink, pharmaceuticals, banking and finance.

## PRODUCTS

Names	The R/3 System	The R/2 System
First installed (year)	1992	1988 (UK)
Number of sites (UK)	115	25
Number of sites (World)	2,600	2,000
Number of releases last three years	2	2
Operating system(s) supported	HP-UX, AIX, OS/1, AXP, SINIX, Solaris, Windows NT, BOS	VSE/SP, MVS, MVS/XA, MVS/ESA
Database(s) supported	Oracle, Informix, Adabas D, DB2/6000	VSAM, DLI, Adabas, IMS/DB, DB2
Standalone distribution	Yes	Yes
Distribution integrated with financials	Yes	Yes
Distribution integrated with financials and manufacturing	Yes	Yes





Hughes have prolonged doubts over the future of Whitehall computer watchdog the Central Computer and Telecommunications Agency.

CCTA director Roy Dibble admitted this week that Hughes's resignation earlier this month meant that the agency had been forced to brief his replacement, John Horam, about his role before a decision could be made about its future.

Dibble expects to hear in May or June what role the CCTA will play within government, though he remains sure that the CCTA will not be abolished because of Treasury demands for cuts.

"This has been going on for 18 months. With Hughes's resignation and the appointment of Robin Mountfield as permanent secretary at the Office of Public Service and Science to replace Richard Mottram,

have a future," he said. Horam's appointment as Citizen's Charter and IT minister has already been condemned at Westminster. The Tory MP for Orpington is a former Labour transport minister who joined the SDP en route to the Conservatives.

Meanwhile, Dibble said suppliers' complaints at last week's Information Systems in Government (ISG) conference about the cost of bidding for projects had been addressed by rapidly whittling down the number of suppliers to around six from, in some cases, initial numbers of more than 100.

"We know that the cost of bidding for these projects can be more than £1m. That is why we are getting rid of people at an early stage and giving the final groups the maximum amount of information before they choose whether or not to bid," he added.

## SAP denies financial benefit accusations

**Julia Vowler**

GERMAN financial software company SAP has hit back at what it calls "iniquitous accusations" over the way the company deals with customers and third-party suppliers.

In a letter to users, SAP chairman Dietrich Hopp and deputy chairman Hasso Plattner said the accusations, which claimed SAP accepts financial commissions from hardware suppliers, destroy trust between SAP and its customers.

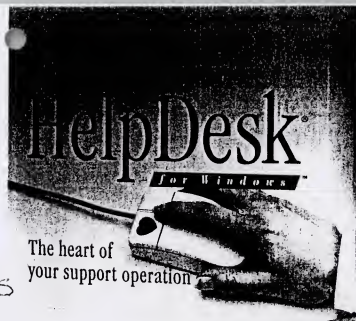
However, while SAP denies benefiting financially from hardware manufactur-

ers, it admits that some user criticisms are valid.

"You can be sure that we are already working on these issues," said Hopp.

The criticism centres on the complexity of implementing SAP's flagship client/server accounting and manufacturing software, R3.

But David Lyons, chairman of the SAP user group, said, "R3 is very good software, but like any wall-to-wall software it has an impact on the organisation, which has to change to match the software, and change is always threatening."



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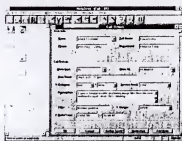
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## IBM revenues rise but stock price falls

### Mixed reaction to IBM's fourth quarter results

Louis Gerstner, IBM's chief executive, is a man who knows how to deal with Wall Street. But even he must have been puzzled by some of the negative reactions to IBM's fourth quarter results. Sales and profits came in way above expectations, making it IBM's best year since 1990, but stocks fell.

The reason was articulated by analyst Stephen Smith of Paine Webber. He told Reuters: "The demand is coming from old technology. There is weakness where there is supposed to be growth." And he has a point. The growth was driven primarily by mainframe sales, a pattern that is considered unsustainable in the long term. At the same time, IBM's PC business, which accounts for one sixth of its turnover, performed appallingly in a fast growing market.

Bob Djurdjevic, president of Annex Research, points out that if the IBM PC Company had done better, IBM's profit margins would have been diluted and would be far lower. And, he says, the fourth quarter results have to be put in the context of some terrible results in recent years. Wall Street's reaction was like "punishing a previously failing child who had just brought home a report card full of As and Bs".

For its fourth quarter, IBM's revenues rose 6.6%, from \$18.7 billion to \$19.9 billion, and net profits were \$1.2 billion against \$341 million last year. For the full year, IBM turned in its first annual profits for four years of \$3 billion against losses in 1993 of \$96 million (before \$8 billion restructuring charges). Revenues increased 6% from \$60.4 billion to \$64 billion.

According to some reports, Gerstner is "alarmed" by IBM's dependence on mainframes – they accounted for some 68% of the company's earnings – and is desperately seeking ways to

reduce it. But these reports are probably exaggerating a minor concern. The slide in mainframe revenue from 1991 to 1993, when even respected industry observers were saying the mainframe was finished, was much more alarming.

Now the mainframe business is showing signs that it is more than just an ailing cash cow. Demand for mainframe power – measured in terms of millions of instructions per second – is rising at 15% to 20% a year, while prices are falling at the same rate. This means that revenues for 1995 will be roughly flat – an improvement on 1994, when they fell 7%.

But that is only half the story. IBM is moving its whole mainframe product range onto new air-cooled multi-processing systems which cost far less to make. Profit margins, already helped by draconian cost cutting, will start to widen again.

But analysts remain sceptical about mainframe technology. Once the pent-up demand for new models subsides, they say, IBM's shortcomings elsewhere will be exposed. Although the latest water-cooled machines and CMOS (complementary metal oxide semiconductor) air-cooled mainframes are sold out for several quarters, this will soften next year.

In addition to building up its earnings in other areas, IBM's challenge – and that of mainframe rival Amdahl – will be to reduce manufacturing costs to deal with reduced demand and to continue to promote the whole idea of mainframe technology. A surge in sentiment towards the mainframe has played a significant part in IBM's recovery.

Another machine that some analysts wrote off years ago continued to contribute to revenue growth. AS/400 sales, boosted by new models and growing confidence about its long-term future, rose 23% in the fourth quarter. Even the RS/6000 Unix system, which lags behind open system rivals from companies such as Hewlett-Packard and Sun, experienced "double digit growth".

The troubles at IBM's \$10 billion PC company continue, however. A series of strategic blunders, including underesti-

mating demand for its latest portables, is believed to have cost the PC business losses of between \$70 and \$100 million.

US sales were particularly bad against the backdrop of superb results for rivals such as Compaq and Apple. "I can assure you that there is an excruciatingly high sense of urgency here," said chief financial officer Jerome York at an analyst briefing. Further restructuring is expected.

Another bright spot for IBM was software and services. Software, which is partly dependent on mainframe sales, expanded 7% during the fourth quarter, to \$3.3 billion, while services business revenue increased 51% during the quarter, to £3.5 billion.

Djurdjevic of Annex says these figures indicate that the IBM management is succeeding in "transforming an 80-year-old manufacturing company into a modern software and services outfit".

A few days before IBM announced its results, Bob LaBant, head of sales and marketing, and Ellen Hancock, head of networking and programming systems, quit after being overlooked in a reorganisation aimed at boosting sales, marketing and branding, especially in vertical market sectors.

The new head of IBM's \$12 billion software division, John Thompson, is likely to be given access to the \$10.6 billion cash mountain for acquisitions to build up IBM's software business further. His role, says Djurdjevic, will be "part marketer, part investment banker".

• IBM UK's chief executive, Javid Aziz, has quit after a boardroom dispute. His departure, like that of European chief Hans Olaf Henkel, is thought to be because of a disagreement over restructuring.

## SAP rises to world market prominence

### SAP leads in client/server business sales

Last month, the *Financial Times* published a list of the top 500 companies in Europe, ranking the companies by stock market valuation.

As a reflection of the state of the region's computer industry, only five IT companies made the listings. Thomson-CSF, the semiconductor manufacturer, was there at number 222; Olivetti and Cap Gemini Societè were in the mid-300s. But the highest placed computer company, which just scraped into the FT500 last year, was SAP AG. The German business software vendor, whose financial results and share price have been defying gravity, is ranked as the 192nd most valuable company in Europe.

At the time the *Financial Times*' list was put together, SAP's market capitalisation stood at \$3.45 billion – five times its last reported revenue figures. In the build-up to the release of what was expected to be a stunning set of year-end figures for 1994, that valuation climbed even higher.

Analysts who were anticipating a 45% leap in revenues and a 70% rise in profits were awestruck as the company announced revenues of \$1,130.0 million (DM1,831.0 million), a 66% jump on 1993, with profits up 92% to \$173.5 million (DM281.0 million).

Over the past two and a half years, SAP has gone from being an accounting and manufacturing software company selling its R/2 package almost exclusively to mainframe customers in Germany, to the global leader in client/server business software. In particular, it has conquered the US market, where it had only a handful of customers in 1992.

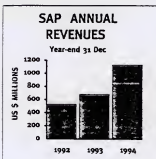
It has done so through a combination of foresight and luck. Its R/3 range of accounting, manufacturing, logistics and human resources software

### IBM'S SOURCES OF REVENUE





## Management Consultants



was the first major product to support large client/server business requirements. Also, in its favour, the competition SAP has traditionally faced has been weak, because of its rivals' technical blunders and poor decision making.

Additionally, SAP has made clever use of a sales channel that was hitherto difficult to exploit, namely the major business consultancies. They have been recommending R/3 to corporate customers while picking up lucrative R/3 implementation contracts.

Although R/3 has been available since June 1992 in Germany, and since early 1993 in most other countries, it is the US market that has made R/3 the best-selling server software package of 1994. In 1992, only 11% of SAP revenues came from US-based customers, many of whom were subsidiaries of German companies; in 1994, North American business accounted for 32% of revenues, almost equaling those derived from Germany. Revenues from North America rose an astonishing 157% to \$367 million (DM595 million) over 1994, compared with a more modest 19% rise to \$412 million (DM667 million) in SAP's German home market.

Results have been equally buoyant in other countries. In the UK, for example, revenues jumped 112% to \$36.5 million (£22.9 million), with R/3 sales accounting for 65% of the subsidiary's business.

With these strong sales outside Germany, international sales surpassed those in the company's home market for the first time in its history, with 64% of sales coming from international operations, compared with 48% in the previous year. R/3 is now installed at 2,400 sites worldwide.

Much of the company's success can be attributed to the fact that its management saw the switch to client/server computing back in the late 1980s and started investing heavily to bring that second generation product to market.

R/3 runs on the most popular Unix servers (half the 2,400 sites are Hewlett-Packard servers) and on NT, typically hooking in Windows clients.

Many companies that should by tradition be competing most heavily against R/3 have still to complete the product transition to client/server.

Dun & Bradstreet Software, which dominated the mainframe accounting software market in many countries in the 1980s, has only recently released its basic client/server line and has suffered badly from not having a competitive product.

Oracle, SAP's closest and fiercest rival, has still to fully transform its applications packages from character-based screens to graphical interfaces. Additionally, applications software only represents a fraction of Oracle's business—5% of its \$2.0 billion revenues, raising questions about its long-term commitment to the sector.

Several AS/400 software vendors still present a strong challenge to SAP, particularly SSA and JD Edwards, but both companies are still trying to expand the scope for their products to Unix and NT. New players, such as Peoplesoft, have emerged with the advent of client/server but have yet to offer the full line of business software that R/3 embraces.

But SAP's success is built on more than a technology leadership. While companies like Oracle are looking for a turnkey sale by offering consultancy, software and implementation skills, SAP has leveraged close ties with the six major consultancies to win business. In large projects, when a company is looking to switch its business model to client/server, these consultants are often called in to advise on strategy and product choice. But the larger firms, such as Coopers & Lybrand, Price Waterhouse and Andersen Consulting, have also built large businesses in SAP implementation, a side of the

contract that often outweighs the software licence sale. Last year, Andersen Consulting in the US alone had a team of 1,000 working on R/3 projects. It plans to double that number this year. Price Waterhouse says it will have 500 consultants tackling R/3 business in 1995.

By relying on consultants to push its products, SAP has been able to keep its costs low. Despite the 66% jump in revenues, the headcount at the company rose only 14% year-on-year to 5,044.

SAP's margins have hardly suffered from this approach. The 1994 figures show profits rising high and a net margin of 15%. It would be higher but the company is trying to maintain its strength in technology by pumping back 24% to 25% of revenues into R&D as it has done for several years.

Hasso Plattner, co-founder and vice-chairman of SAP, says that by the end of this year, the company will have pumped \$640 million into R/3 development. With those resources going into product enhancement, it will now be a struggle for others to keep up with SAP.

## Acer prepares to take on the big PC makers

### Taiwanese company eyes US PC market

In 1991, Taiwanese PC maker, Acer Inc set out to take on the world's largest PC companies on their home turf—the US market. Stan Shih, Acer's co-founder and chairman, wanted to take the company away from its origins as a contract manufacturer, producing machines for other vendors to rebadge, toward selling under its own brand name.

Four years on, Shih has gone a long way to achieving his ambitions. Acer is the tenth best selling PC brand worldwide, increasing its market share in 1994 by 65%, according to research company International Data Corp (IDC).

But the transition was not a smooth one. In 1991, the com-

pany reported losses of \$22.7 million, the first loss since it was founded in 1976.

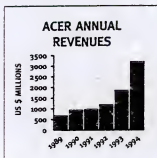
Slow US sales had combined with a costly acquisition strategy at a time when US manufacturers, such as IBM and Compaq, were slashing prices. Acer had to wait until 1994 to make a profit in the US market.

In the meantime, Acer needed to keep the cash coming in. It did not have the resources of its big rivals so Shih concentrated on the company's strengths as a small, flexible and aggressive local manufacturer.

The group decentralised into semi-autonomous local subsidiaries. The units now inter-operate in what Shih calls a "client/server" strategy. Each one of Acer's units is quasi-independent and responsible for making its own decisions as well as profits. The subsidiaries do not have to buy components from sister units although Acer admits that none have ever bought from outside the group.

At the same time, Shih introduced his "fast food" strategy of PC production. Semi-completed machines are shipped from Taiwan and completed at plants closer to the target market. This means the company can produce local solutions. "Our research in Europe, US and Taiwan shows that all have completely different requirements," says Teddy Lu, president of Acer Europe.

Acer's move to produce its brand name products alongside its OEM business has also paid off. The initial OEM business had been run down in favour of pushing brand name sales (in 1992 OEM business was down to only 25%). Since then, Shih has moved to increase OEM sales alongside brand name expansion. In 1994, OEM sales rose to become 55% of the company's revenues and Shih's





### X SAP'S FANS SUFFER ANGINA AS THE COMPANY WARNS ABOUT THE CURRENT QUARTER

SAP AG was pleased with its growth in the first nine months of the year, but its figures disappointed analysts and the markets, and the company warned that the fourth quarter growth rate would not match that of a year ago, which it described as "exceptionally strong." Profits from operations in the nine months to September 30 were up 47% to the equivalent of \$270.8m, on turnover that rose 57% at \$1,259.1m. The company said currency fluctuations cost it \$17.6m in reduced profits. SAP announced that it had signed an agreement with Bedford, Massachusetts-based Computervision Corp for the latter to develop an interface between its Optegra data management software and SAP's R/3 business application. SAP will act as a consultant under the deal. Around 70%, or \$879m of SAP's turnover in the period came from software product sales, a rise of 60% on last time, and consulting turnover rose 42% to \$243m and training sales were up 71% at \$116m.

### X BULL REPEATS ITS TARGET OF \$20,000m SALES BY 2000 AS ITS DEFICIT SHRINKS

Compagnie des Machines Bull SA wants another European partner to take a 17% stake during the second stage of its privatisation, chairman Jean-Marie Descarpentries said, announcing first half losses sharply reduced. Its 17% shareholders are NEC Corp, Motorola Inc and France Telecom, which likes to present the fiction that it is something more than an agency of the French state. The hard part will be finding a European company with the necessary means and interest: Siemens AG has the one, but likely not the other. The company is aiming for sales of \$20,000m by the year 2,000 with a profit margin of 4%, Descarpentries said, but the former figure looks hugely over-ambitious and unrealistic without an enormous acquisition. The first half loss was equivalent to \$25m, down from \$366m a year ago. Turnover fell 10% to \$2,480m.

### DRAFT FRENCH BILL ENVISAGES COMPLETE TELECOMMUNICATIONS LIBERALISATION

France will fully open its telecommunications market to all comers and will award its first licences in 1997, but France Telecom will remain responsible for basic services, *Le Monde* reported. Under the draft law proposal sent to industry and unions for consultation, France would impose no restriction on European telecommunications operators wanting to do business in France, but for non-Europeans, France would allow access on reciprocal basis, so for example, a US operator would be allowed to own no more than 20% of a French company - although by 1997, the equivalent US rule will almost certainly have been relaxed if not abolished. France will reasonably keep the number of cellular players restricted because of the limited number of frequencies available. At the same time as throwing open the market to competition, France wants to maintain universal service, which access for everybody to the network, equal tariffs regardless of where a subscriber lives, a directory and free emergency calls. France Telecom will be given these responsibilities, and will have to make its accounting more transparent. It will be compensated for the costs it suffers in meeting the universal service requirement from contributions made by its competitors. The levels of these charges will be crucial.

### X MICROSOFT WALKS ON WATER AS IT FINDS NO NEED FOR MAINTENANCE, WINDOWS95 RELEASE

Microsoft Corp's Windows95 turns out to have sold 7m copies in the seven weeks it has been on sale, significantly more than had been assumed, giving the company a 58% jump in profits for its first fiscal quarter on turnover that just made it through the \$2,000m mark with a 62% rise, implying that Microsoft will do close to \$9,000m for the full year to June 30. The 78 cents a share for the quarter was well ahead of the consensus estimate of 70 cents and the shares opened sharply higher, up \$6.875 at \$98 yesterday. Microsoft says it has sold 3m copies of Windows95 at retail, which is why people had been underestimating total sales - it pushed some 8m copies into the retail channel at launch, so dealers are still choking. The other 4m copies went out to end users pre-installed on new personal computers. Senior vice-president Brad Silverberg told Reuters that 28% of US customers buying Windows95 are also buying the company's Plus product for the operating system, an attach rate he called "unbelievable." Windows95 already is available in 17 of 30 planned languages, and the Japanese-language version was released to packaging last week; Chinese and Korean language versions follow this week, and all three Asian languages will be available to end users by next month. People like the thing, too: more than 91% of users of Windows95 told Techscan Inc, an independent market research firm that they are satisfied or very satisfied with the product, he said. Adoption of Windows95 within corporations will be much slower, but than 160 major accounts worldwide have signed purchase agreements, the Redmonder says. Microsoft also says the BackOffice range of products continued to build momentum, with Windows NT revenues up nearly four times over last year's first quarter. On the Microsoft Network, Microsoft said it was "very happy" with the sign-up rate, but has not yet reached its self-imposed temporary limit of 500,000 members.

#### Really, really solid

Silverberg said that Windows95 has performed so well in customer acceptance research that no maintenance release is currently planned. "The product quality has been really, really solid," he said. "We have no plans to do a maintenance release." Before the launch he had said that updated versions would be released as necessary to include new features and any needed bug fixes. The message is that sheep - corporate data processing managers - may safely graze. The company said OEM sales rose 50% from the year ago period to \$548m. Silverberg said his team is continuing to develop future versions of Windows95 but he declined to give any details. Directly, Microsoft did \$260m business from retail sales of the Windows95 upgrade, chief financial officer Mike Brown said. Another \$130m in revenues from the product were booked in the quarter, but will be recognised over the life of the product, currently estimated at 18 months, Brown said in a conference call with analysts and reporters. He also said that the company earned \$780m revenues from desktop applications during the quarter, and deferred another \$120m in desktop revenues to recognise the effect of its Office applications upgrade: most of the deferred Office revenue will be recognised in the current quarter. The idea of making the deferrals are to iron out the worst of the peaks and troughs that traditionally occur.





# MANAGEMENT CONSULTANTS NEWS

VOLUME 7

NUMBER 2

## Ernst & Young sets sights on Far East

Ernst & Young has become the third Big Six firm this year to make major organisational changes aimed at winning more global consultancy work.

E&Y has plugged a gap specifically in its service to global clients with a strong Far East presence, by striking a deal with Asia's biggest IT consultancy, Tata Consultancy Services (TCS).

E&Y's 10,000 consultants worldwide – just under 1,000 of them in the Far East – will join forces with TCS's 5,000 IT consultants on a project-by-project basis. There is no takeover or formal joint venture company.

This follows moves by Price Waterhouse to integrate its US, European and Japanese operations, and Touche Ross to gather its UK and American consultancies under the name Deloitte & Touche – with the same express aim of improving service to global clients (see MCN last issue).

Ernst & Young UK client service managing partner Clive Williams said: "This alliance marks a significant milestone in achieving our vision as the leading provider of global consulting services."

But E&Y's decision to boost its Asia-Pacific presence by the TCS alliance, rather than strengthening its own inhouse consultancy, raises questions over the real impact of its new service offering. E&Y acknowledged it would not be adopting a shared methodology with TCS. But IS practice partner Richard Dicketts, who is charged with developing the TCS alliance, said: "There is strong synergy between the two firms. We have a very similar value set in the way we treat clients, and we will share expertise."

TCS is based in Bombay and has worldwide revenues of \$130 million. Its main strength is in systems development.

extended to the firm's other offices in France, Benelux, Germany, Austria and Switzerland.

The scheme has some quirky elements. Visitors to the new Paris HQ are greeted by uniformed staff more akin to air hostesses than receptionists, said Andersen.

Consultants book office space when they need it. They keep their files in mobile cabinets and most use portable PCs. Teams can book space together and the building has meeting areas and informal lounges where clients can be met.

Andersen would not reveal SpaceNet's upfront design and other costs.

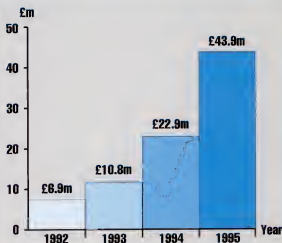
## Andersen gets more for less

Andersen Consulting will save \$1 million a year on its Paris office costs through an innovative space sharing scheme.

Andersen has just moved into new headquarters on Avenue George V, designed under the SpaceNet initiative by the Chadwick design group. No one has their own office and Andersen saves money by fitting more staff into 3,000 sq metres less space.

SpaceNet, driven by Andersen Western Europe boss David Andrews, will be

SAP UK SALES REVENUES



EARNINGS AT SAP UK CONTINUE THEIR STRONG GROWTH

## SAP revenues rise 47% to \$1.9 billion

SAP, the world's leading business applications software vendor, has announced that its 1995 revenues increased 47% to reach \$1.9 billion. SAP says its continuing strong financial performance is due to the success of its market-leading R/3 client/server software which has now been installed at more than 5,200 sites worldwide.

Net profit also increased by 44% to reach \$284 million.

In the UK, SAP's revenues increased by 92% to £43.9 million, compared with £22.9 million in 1994. Over £28 million of SAP UK's revenues were derived from R/3 licences, and there are now more than 140 R/3 users in the UK. New contracts announced in 1995 included the Inland Revenue, Cadbury, Pilkington, Post Office Counters and Grand Metropolitan.

Training revenues also

increased significantly to £5.2 million and headcount at SAP UK increased by 45% to 131 at the end of 1995, compared with 90 at the end of 1994.

"These results show that SAP continues to lead the market for client/server applications software by a wide margin, particularly since the launch of Release 3.0 of R/3," said Petra Frenzel, managing director of SAP UK. "The impressive growth in UK revenues is due to the business benefits that we are delivering to clients, and the significant investment that we have made in customer service and support, which is reflected in the very positive feedback received from customers."

## IN THIS ISSUE

SAP CONSULTING PARTNERS  
COOPERS AT BP SUBSIDIARY



# Coopers helps BP subsidiary

The achievement of BP subsidiary Honeywill & Stein (H&S) in implementing SAP's client/server R/3 applications software in just 24 weeks is being branded a significant success story.

By defining clear objectives and using a new rapid implementation methodology from Coopers & Lybrand Management Consultants, H&S was able to start reaping the business benefits of R/3 in record time. The system has now been expanded to H&S's sister company, BP Chemicals Trading (BPCT), with similar results.

Honeywill & Stein is the leading speciality chemicals distributor in the UK, representing more than 40 manufacturers and offering a range of 400 products. It has a turnover of approximately £29 million and employs 35 people at its UK offices in Sutton where it shares a senior management team and support services with BPCT, an international commodity chemicals trader with a turnover of around \$135 million.

Shared ageing IBM S/36 systems were no longer capable of meeting the businesses' needs for information on product availability, distribution and trading. The main disadvantages of the old system were the need to take it away from the sales and marketing teams for two or three days at month-end to handle financial processing, and its inability to provide top-level management information.

Having persuaded their management of the need for change, financial controller Robert Spicer and his team chose SAP's R/3 from a shortlist that also included Proteus, WIS, CFACS and Tetra. The decision was based on a thorough evaluation of a demonstration system built by Coopers. "SAP offered a more comprehensive product than any of its competitors," said Spicer.

Coopers, an accredited SAP consulting partner, also provided assistance when the implementation began in August 1994. H&S/BPCT did



ROBERT SPICER: "SAP OFFERED A MORE COMPREHENSIVE PRODUCT"

not have the resource inhouse and Coopers' new rapid implementation methodology promised rapid results.

Twenty-four weeks after the implementation began, H&S went live with integrated software for managing all aspects of its sales and distribution, logistics, materials management and finance. Spicer attributes this record timescale to the fact that although it was implementing a complex and sophisticated system, H&S is a relatively small company and was not carrying out any major BPR. Also, it had defined its needs carefully at the outset and users remained closely involved throughout.

The rapid implementation methodology also contributed significantly. Robert Sinclair, Coopers & Lybrand's SAP Practice Leader and the manager in charge of the project, explained: "Many R/3 projects are lengthy because of the steep curve that inhouse development staff have to go up in learning about the software at the

same time as they are trying to implement it."

Sinclair defines four stages to every R/3 project: learning about the software, system design, prototyping and implementation (testing, training and "going live").

"In most cases this is a linear process and if consultants are involved it is usually at a low and fairly constant level throughout. Our rapid development methodology takes a different approach by frontloading the external resources so that the learning and system design phases take place at the same time. Skills are then transferred to the inhouse team over the prototyping and implementation phases, so that by the end of the project the consultants' involvement can be minimal."

## Benefits

Sinclair claims that the client can also benefit financially from this approach, compared with long-term consultancy projects. H&S and BPCT spent a total of £800,000 on their R/3 project including the software, the

HP9000 hardware platform and consultancy, which amounted to around £250,000, a relatively low expenditure for a project of this magnitude and complexity.

User reaction to the new system has been good, as it enables them to see the entire integrated transaction and distribution process. The benefits of the new technology include more accurate and detailed sales information, greater customer responsiveness and better stock control. Most importantly, the system has the capacity to support the business's rapid pace of change.

Once the H&S implementation was complete, the same team moved on to BP Chemicals Trading, developing a system that would integrate the trading and back office functions and support a high-pressure global business. When the implementation began, the skills transfer from the external consultants to the inhouse team was complete, so BPCT was able to carry out the implementation with virtually no external assistance.

The system went live after five months, to a positive reaction from users. Visible benefits include greater responsiveness, as R/3 has speeded up and automated much of the deal authorisation process, and better global integration.

In the longer term the R/3 system "provides a strategic platform from which we can think about where to go next", said Spicer. Most important, R/3 delivers benefits to customers and suppliers in terms of better information and better service.

Spicer concludes: "SAP is important to our marketing strategy; it says something about our company."

For more information about SAP, please contact: Trevor Salomon, SAP (UK) Ltd, 7 New Square, Bedford Lakes, Feltham, Middlesex TW14 8HA. Tel: 0181 818 2968. Fax: 0181 818 2990.

## THE LEX COLUMN

# Southern discomfort

Both Britain's generators must be spitting blood. Until yesterday it seemed virtually certain that their bids for regional electricity companies (reCs) would be waved through by the government. Now, Southern Company has raised the stakes; ministers are more likely to think twice about allowing the bids now this could mean Britain's biggest generator being based in Atlanta, Georgia. The odds are still on the bids going through, but a fit of Little Englander protectionism cannot be ruled out. Still, that would be the right decision for the wrong reason. At the very least, Southern's approach underlines the vacuity of the Monopolies and Mergers Commission's "national champions" argument.

But paradoxically, the real victims of a Southern bid could be its own shareholders. For all the airy talk of creating a new global group, it is far from obvious that merging Southern with National Power would create any value at all. On the contrary, it could destroy it. The reason is that Southern already owns a rec - South Western Electricity. And merging that much smaller rec with National Power makes much less sense than National Power's planned bid for a much bigger rec - Southern's namesake, Southern Electric of the UK. Dropping the Southern Electric bid would almost certainly be the price of a Southern-National Power merger; to persist with it - at least in the short term - would carry too high a risk of the deal getting bogged down at the MMC.

This is one good reason why Southern is unlikely to pick up National Power unless it is willing to pay a conspicuously high price; Southern will have to offer enough to compensate for the loss of the Southern Electric deal. And that is not all; given its bloated balance sheet National Power could comfortably afford to pay out a fat special dividend on top. Southern might be able to outbid all that, but it would almost certainly be substantially overpaying.

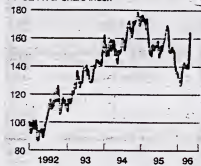
## Smiths Industries

Smiths Industries has prospered mightily in the past four years, despite the worst aerospace recession in living memory. The group cut costs early and hard in its aerospace division and used its formidable cash flow to expand its medical and industrial operations. Since 1991 it has made over £300m worth of bolt-on acquisitions, all of them for cash. The effect has been to transform relatively pedestrian organic growth - yesterday's results showed a like-for-like sales increase of only 6 per cent - into

FT-SE Index: 3805.6 (-19.7)

### National Power

Share price relative to the FT-SE-A All-Share Index



Source: FT Extel

annual earnings growth of 15 per cent, and more. This strategy propelled Smiths into the FT-SE 100 index last December and its shares now sit on 15 times earnings for this financial year - a 20 per cent premium to the market average.

With a rating like that, Smiths cannot afford to slip up. Its cash generation is as strong as ever; after tax, interest, dividends and capital spending, free cash regularly amounts to half of pre-tax profits. So far the group has found a ready supply of suitably priced targets to soak up that cash. Sooner or later, however, the group's increasing size and the fact that margins at its existing businesses are already high, at 15 per cent, will probably tempt it into a big purchase.

That would increase the group's risk profile and require a share issue. But if Smiths can take part in the consolidation of the defence and aerospace industries, it could also bring opportunities. The idea of Smiths' proven management getting its hands on one of Europe's underperforming, state-run defence enterprises is certainly attractive.

## US airlines

The first crop of US airline results confirms last year's rebound in profits. Price competition has eased, passenger volume is holding up and airlines have so far resisted the urge to buy aircraft. The worry is that this more comfortable state of affairs has made it harder than ever to persuade unions to accept cost cuts - USAir has still to address this problem. And the long-term trend is still for airline passenger yields to fall.

But yesterday's announcement by AMR, the parent of American Airlines, that it is to restructure its Sabre com-

puter reservation system as a separate subsidiary prior to a possible spin-off could be good news for investors. Saddling Sabre with some of the airline's debts and floating some or all of it would raise a hefty war chest. This is likely to fuel renewed speculation about consolidation within the industry. The industrial logic is impeccable; the main block has been the importance of national carrier status to most airlines. However, this does not apply within the US market. And American's failure to find a European partner has left it vulnerable. Buying a European airline - the most obvious solution - might prove too politically awkward, but a US airline with a European partnership could be just the ticket.

SAP

FT 18/4/96

SAP has come from nowhere so fast - in the past three years sales have tripled while profits and the share price have more than quadrupled - that investors half-expect the German software group to disappear again. Over the past six months the stock has underperformed the Frankfurt market by a third due to fears that its main software product could rapidly become obsolete.

But SAP does not look as if it is about to implode. Yesterday's first-quarter results gave analysts a chance to tone down their forecasts, but they still expect earnings growth of 45 per cent this year. SAP depends heavily on one product: its R/3 server software accounts for nearly two thirds of turnover. But this is a market that is expected to grow at 30 per cent a year for the foreseeable future. And SAP dominates the segment for personnel, logistics and financial management programmes. It signs long-term contracts with existing clients and is still expanding geographically and into new industries in Germany, where it is developing applications for retailers and construction companies. SAP's clout - it is twice the size of its next three competitors put together - also gives it economies of scale. The group is planning to spend DM3bn on research and development over the next three years. Ever so, margins should rise during 1996 following a big rise in service costs last year.

Despite the recent weakness in its share price, SAP remains highly rated at 34 times this year's earnings, falling to 18 times in 1998. But pure high-technology stocks in Europe are a rare commodity.

Additional Lex comment on L'Oréal.

Page 24



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bidding offers for the purchase of the  
STMENTS S.A. (IPOKRAOTUS

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363-2582 (also fax) up to 12.00 noon

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te, tel: +30-1-726-0210, 726-0278.

Mr Puehringer attributed the  
leap to strong sales for steel  
plants, especially in east Asia  
and North America. Net  
income was also inflated by  
the sale of some real estate, he  
said.

Operating profit climbed 13  
per cent from Sch1.13bn to  
Sch1.27bn. VA Tech will raise  
its dividend to Sch23 a share

lost 6 per cent from Sch27.90bn  
to Sch26.09bn because VA Tech  
completed fewer projects than  
in 1994. Two-thirds of sales  
came from abroad.

Mr Puehringer said he hoped  
to compensate weaker demand  
from western Europe and the  
former communist countries  
by boosting sales in overseas  
markets.

Operating profit at the  
metallurgy division jumped  
from Sch394m to Sch534m last  
year, and Mr Puehringer said  
the company was among the  
top three world suppliers of  
modern steel plants.

The first steel plant using  
VA Tech's new Corex  
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rose from Sch507n  
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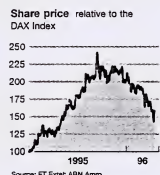
Operating profit  
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# SAP share price slips as analysts' forecasts queried

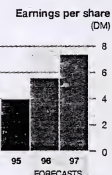
By Wolfgang Münchhau  
in Frankfurt

## COMPANY PROFILE: SAP

Market capitalisation	\$7.9bn
Main listing	Frankfurt
Historic P/E	134.1
Gross yield	4.34%
Earnings per share 1995	DM4.0
Current share price	DM188.0



Dietmar Hopp  
executive board chairman



A senior executive of SAP, the  
German business software  
group, has suggested that some  
analysts' profit forecasts were  
over-optimistic, prompting a 7  
per cent fall in the share price  
yesterday to DM188.

Mr Henning Kagermann, a  
board member, said in an  
interview with VWD, a German  
economics news agency, that  
forecasts of a 50 per cent  
rise in earnings per share were  
too high.

The company confirmed the  
comments, stressing that they  
referred to the whole of 1996,  
and not the first quarter.

SAP is due to announce its  
first-quarter results later  
today. The announcement has  
been brought forward to counter-  
act growing speculation  
about the business outlook,  
and has been keenly awaited  
by investors.

Mr Kagermann also hinted  
that SAP might list its shares  
on the New York Stock  
Exchange in 1997 or 1998.  
Daimler-Benz, the automotive  
group, is the only German  
company with a US listing.

SAP is best-known for its R/3  
client-server software, which  
combines a series of specialist  
modules for various business  
areas, including cost account-  
ing, personnel and production  
planning. The company has  
been credited with having  
developed this market segment  
in the 1970s.

Partly driven by strong  
interest from abroad, SAP, the  
world's fifth largest software

maker, was one of the top  
stock market performers in  
Germany last year, with a  
market capitalisation higher  
than that of Lufthansa and  
Volkswagen. However, SAP's  
shares have fallen 15 per cent  
since the beginning of the  
year.

Mr Peter Thilo Hasler, an  
analyst at Vereinsbank  
Research, said: "This is not  
even the end of the correction.  
From a chartist's point of view,  
the shares are catastrophic.  
SAP is of course a solid  
company, but is essentially a  
one-product company, a prod-

uct that everybody knows."

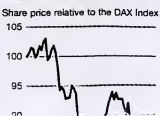
Last year, R/3 accounted for  
sales of DM1.65bn (\$1.1bn), the  
single largest constituent in  
SAP's group turnover of  
DM2.69bn. Net profits  
increased 44 per cent to  
DM405m in 1995.

Earlier this month, SAP's  
share price was hit by a report  
from Forrester Research, a US  
consultancy firm, which fore-  
cast that the business software  
market would change funda-  
mentally by the end of the  
decade and that R/3 would be  
rendered obsolete in its current  
form.

# Holzmann loss shocks market

By Andrew Fisher in Frankfurt

## Holzmann



Shares in Philipp Holzmann,  
Germany's largest construction  
company, fell sharply yester-  
day after the surprise news  
that problems in the property  
market had caused heavy  
losses in 1995.

The shares closed DM34  
lower at DM510, a fall of 6 per

Hochtief owns 24.9 per cent  
of the company and hopes to  
acquire a further 10 per cent  
held by Commerzbank. How-  
ever, the Federal Cartel Office  
has turned this down and the  
matter is with a Berlin court,  
after an appeal by Hochtief.  
First court hearings are expected  
around November.

Yesterday Hochtief in

# Gambro pays \$7 for US care gr

By Hugh Carnegie  
in Stockholm

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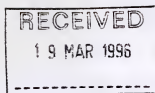
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Contact: Trevor Salomon  
SAP UK Ltd  
0181 893 2893

Niamh Lyons /Cass Meaden  
The Weber Group Europe  
0171 240 6189

## **SAP DEMONSTRATES NEW INTERNET - ENABLED R/3 AT CeBIT**

*SAP To Work With Microsoft To Enable Business Transactions Over The Internet,  
Develop New Common Interfaces*

**FELTHAM, March 18, 1996** - SAP, the world's leading provider of client/server business applications today announced that it will work with Microsoft Corp. and standards organisations to develop common interfaces for conducting business transactions over the Internet. As part of its goal to provide customers with a top-to-bottom platform for Internet commerce, SAP will build on Microsoft's implementation of open Internet industry standards, including Microsoft AE Internet Information Server, merchant server, Microsoft Internet Explorer and ActiveX Technologies. At the CeBIT conference in Hanover, Germany, SAP is demonstrating new Internet- and intranet-enabled SAP AE R/3 capabilities as well as some of Microsoft's Internet technologies.

The business application programming interface (BAPI), SAP's implementation of the common interface, will extend access to mission-critical business systems over the Internet. Using BAPI as well as Microsoft Internet technologies, SAP will provide greatly enhanced Internet functionality to its widely used R/3 systems. "For the Internet to become an available business platform, the industry needs to embrace a common way to facilitate business transactions," said Prof. Dr. Hasso Plattner, vice chairman of SAP AG. "We believe Microsoft understands how to bring together the best of LAN-based client/server technologies and the Internet. Therefore, we will work closely with Microsoft to layer our business applications on top of Microsoft's client/server and Internet infrastructure to deliver an open, robust solution for our joint customers worldwide."

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## **ALLIED IRISH BANKS SELECTS SAP'S R/3 APPLICATION SOFTWARE**

### *R/3 Manages Group Expenditure Requirements*

**FELTHAM, March 13, 1996** -- SAP, the world's fifth largest software company, today announced that it has signed a significant contract with Allied Irish Banks Group, the largest bank in Ireland. The bank will implement SAP's client/server-based R/3 business application software to assist in managing its expenditure, initially at its Dublin, Belfast and London head offices and, subsequently, at over 300 regional branches across Ireland.

SAP's R/3 System was selected after a thorough evaluation process against competitive products. The system will be used to streamline and reengineer current processes from budgeting and purchasing to financial reporting. Allied Irish Banks will be installing SAP's application modules for finance and accounting, purchasing, projects, asset management and plant maintenance. R/3 will replace a number of disparate systems currently at use in Allied Irish Banks.

"We are delighted that R/3 has been chosen to underpin Allied Irish Banks' move towards achieving more cost-effective, efficient back office banking procedures," said Trevor Salomon, corporate communications director of SAP UK. "Allied Irish Banks is one of a growing number of financial institutions that have selected our R/3 software in the last six months."

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